

# DWR NEWS *People*

WINTER 2010-2011



## A Better Understanding of Delta Fish

**Left to Right:** Michele Johnson and Kevin Clark releasing implanted juvenile Chinook salmon at Old River near Lathrop.



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*“What I have enjoyed the most are the people here at DWR and the sense of team work and dedication that has pervaded all the tasks in which I have been involved.”*

**Gerald Johns**

*Deputy Director, Department of Water Resources*

As most of you know, I officially retired from State Service at the end of 2010 after 38 years and will be working as a retired annuitant for the first couple of months of 2011 to help finish off a few specific Bay Delta Conservation Program (BDCP) tasks. After that, it is off to new experiences and a little skiing.

I would like to take this opportunity to express how much I have enjoyed being at DWR these last 9 ½ years. While I learned the water business from the regulatory side when I was at the State Water Resources Control Board, I have found most rewarding the implementation aspects that we get to do here at DWR. What I have enjoyed the most are the people here at DWR and the sense of team work and dedication that has pervaded all the tasks in which I have been involved. When I first came to DWR to work on water transfer issues and the Environmental Water Account, I was impressed by how the different organizations from SWPAO, Legal, Operations, DPLA, Environmental Services, Bay Delta Office, Fiscal and others all worked together to help make these programs successful. We met weekly and I was continually impressed at the energy, professionalism and dedication of each and every one of the people who worked on these tasks. The term “matrix management” is often used to describe this kind of collection of expertise from various organizations to accomplish multidisciplinary tasks. The teams worked well together to accomplish our goals which is a tribute to efforts of all those involved.

I have witnessed this same kind of dedication in all the activities I have seen at DWR. From the Jones Tract levee failure repair in 2004 to the non-physical barrier projects in which we are now engaged, the challenge of BDCP and many others, the DWR engineers, biologists, fiscal staff and other support staff have exhibited the kind of “can do” spirit that is not seen in other agencies. Our Divisions of

Engineering and Environmental services together with other DWR organizations have moved resolution of the technical aspects of Delta issues forward to the point where clear policy decisions are now needed for us to make progress. The depth of knowledge and professional analysis that DWR brings to its assignments is impressive and we have a reputation for this throughout the State. DWR is called upon in times of trouble, be it droughts or floods, to help the State through crises and DWR always delivers even when times are tough.

Another attribute that I have seen time and again is the integrity that DWR staff brings to issues. In all my dealings, I have seen DWR staff keep in the forefront the best interests of the people of California in addressing issues. We all have points of view on issues but I have seen an openness to share ideas, even controversial ones, in an open discussion and then work together to resolve issues in ways that best protect the public interest. I have not seen the kind of ideological approach that often plagues other agencies. Keeping the broader public in mind is essential for DWR to be effective since we deal with so many complex and diverse issues that touch so many people. I have seen DWR staff take their responsibilities seriously and handle them with integrity. The people we deal with may not always agree with the decisions we make but most, if not all, feel they have been treated fairly.

I have confidence that DWR will continue to exhibit the professionalism, dedication, teamwork, management and leadership skills that I have had the opportunity to witness this past decade. I wish you all the best.

**Gerald Johns**

Deputy Director



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# A Better Understanding of Delta Fish

*By Delta Conveyance Fish Science Section Staff*

The Delta Conveyance Fish Science Section of the Bay-Delta Office is leading a series of field investigations to evaluate the behavior, movement, and survival of juvenile salmon, steelhead and green sturgeon near the State Water Project (SWP) temporary barriers in the south Delta.

Personnel from the South Delta Branch in the Bay-Delta Office have been administering the installation and operation of the temporary agricultural barriers on Middle River, the Grantline Canal, and the Old River near Tracy for nearly 20 years. The rock barriers incorporate gated culverts and are installed in the spring and removed each fall. They are designed to raise water levels during periods that farmers pump water for irrigation. In 2008, the National Marine Fisheries Service (NMFS) required a three-year fish monitoring program to gauge the impact of the barriers on juvenile salmon, steelhead and green sturgeon and some of their predators, including striped bass and largemouth bass.

*Left to Right: Environmental Scientist Kevin Clark, Environmental Scientist Javier Miranda, Scientific Aid Gina Beer, Scientific Aid Gabe Singer, Scientific Aid Michele Johnson, Environmental Scientist Gardner Jones, and Engineer Katherine Maher preparing to surgically implant hydro acoustic transmitters in juvenile Salmonids at Skinner Fish Protection Facility in Byron.*

In 2009, the Delta Conveyance Fish Science Section staff developed and completed a pilot fish monitoring study proposal. DWR employee **Zaffar Eusuff**, who until recently headed the Fish Science Section, explained that the expertise of the Section's fish biology staff was why the Temporary Barriers Program assigned his former Section to conduct the fish monitoring studies. Zaffar led the group, consisting of engineers and biologists, and met with the National Marine Fisheries Service (NMFS) to design the fish monitoring study. Data gathered through the fish monitoring studies is intended to help with the design and operation of future Delta barriers.

## How Studies are Completed

So, just how does one go about observing the habits of creatures that would prefer to avoid all contact with humans?

"We use biotelemetry," said **Kevin Clark**, who is co-leading the fish monitoring study together with **Javier Miranda**. Both are environmental scientists with the Delta Conveyance Fish Science Section.

"Juvenile salmon and steelhead are implanted with transmitters, then released into the south Delta river channels," said



Javier. “We monitor them at fixed receiver locations in the south Delta, the SWP and Central Valley Project export facilities, and at the temporary barriers.”

Kevin goes on to explain how they are using a two-dimensional (2D) acoustic telemetry system to look at the fish as they pass the Old River-Tracy barrier and the non-physical barrier at the Head of Old River. The 2D telemetry system is capable of producing a two-dimensional fish track showing where and how fish move as they approach and pass the barrier.

Kevin adds how their team catches bass and catfish by old-fashioned hook and line techniques before affixing them with acoustic tags and releasing them to see how they interact with the salmon and steelhead and barriers.

Thus, a combination of new high tech equipment and old-school fishing techniques is intended to provide information that could be used to make improvements to the barriers to improve fish survival.

One of the most visual aspects of the monitoring study involves use of an “underwater DIDSON” camera. DIDSON stands for “Dual-frequency Identification Sonar,” a technology that has proven effective in capturing video images of fish in the turbid waters of the Delta, where other video equipment fails to see anything. Javier is the resident DIDSON expert and recently used a DIDSON camera for portions of another project where he investigated the behavior of predatory fish at the release sites for fish salvaged at the SWP. The DIDSON provides a unique opportunity to observe predatory fish behavior near the temporary barriers.

“We have one DIDSON camera right now,” said Zaffar. “They’re expensive, running about \$80,000 each, but they are proving to be invaluable in these kinds of studies. They not only observe the fish...but can be set up to count and size the fish as they pass through the sonar’s field of view. It also can be used to inspect underwater structures without the need for divers. Our Section has been approached several times over the past year to assist with other studies that could benefit from the information that the DIDSON camera provides.”

The 2009 pilot effort was a collaboration between DWR and the Vernalis Adaptive Management Plan (VAMP) study team. The “VAMP” study team has been conducting monitoring studies for several years within the San Joaquin River Watershed and was also using similar biotelemetry techniques

*“Juvenile salmon and steelhead are implanted with transmitters, then released into the south Delta river channels.”*

**Javier Miranda**  
*Fishery Improvements*



Javier Miranda implants hydro acoustic transmitter into juvenile Chinook salmon.

**Right:** Testing of Non-Physical Barrier, which was installed in 2009 at the confluence of Old River and the San Joaquin River near Lathrop.



Juvenile Chinook salmon, approximately 13 grams, are surgically implanted with a .65 gram acoustic tag. (Dime shown for size comparison)



as part of their monitoring program. DWR and the study team met to coordinate the two studies to maximize use of the available equipment, such as fish detection receivers.

As there was a short window of time to get the study off the ground and with the State budget woes beginning to take effect, resources for the study were slim in 2009 and 2010, so a request for assistance was sent out to other groups within DWR. The Division of Environmental Services (DES) answered that call.

"Without the support of the DES, the 2009 pilot study may not have been a success," said Zaffar. "Staff from DES assisted with the field

activities and provided a second boat and truck for our section to conduct those activities. In 2010, staff from the Bureau of Reclamation was recruited to conduct the full scale study. Together these groups worked to make the past two field seasons a success."

Data collected in 2009 and 2010 are being processed. Planning for a second full scale study in 2011 is underway.

### Expanding Role

The Section's role continues to expand with the issuance of the 2008 United States Fish and Wildlife Service Operations Criteria and Plan (OCAP) Biological Opinion for delta Smelt, NMFS 2009 OCAP Biological Opinion, and Department of Fish and Game Incidental Take Permit for Longfin smelt.

**Sheila Greene**, the new program manager for the section, brings over 25 years of fish-related experience as the Section takes on several new activities and studies, including efficiency experiments and larval monitoring at the John E. Skinner Delta Fish Protective Facility, and fish screen effectiveness monitoring at the DWR fish screens on Sherman Island, North Bay Aqueduct and Roaring River Distribution System.

Some of this new work will continue the efforts of previous investigations already completed by the Section, such as the Steelhead Pre-Screen Loss study conducted within Clifton Court Forebay and the Collection, Handling, Transport, and Release (CHTR) studies at the Skinner Fish Facilities. As with these previous investigations and the temporary barriers monitoring study, the Section will coordinate with other Department staff and other agencies to successfully carry out these studies.

"Whether the Delta Conveyance Fish Science Section is tracking fish near the temporary barriers or conducting

*Left to Right: Scientific Aid Gabriel Singer and Engineer Katherine Maher from the Bay-Delta Office monitoring and downloading acoustic data from HTI receivers on Old River near Clifton Court Forebay.*



experiments at other Department fish facilities, they will continue to evaluate the potential impacts the facilities have on fish and develop solutions to some of the problems that may be identified as part of those studies,” said Greene.

Field investigations by the Delta Conveyance Fish Science Section of the Bay-Delta Office in cooperation with other State and federal agencies include:

### **Evaluation of Mortality and Injury in a Fish Release Pipe**

“Evaluation of Mortality and Injury in a Fish Release Pipe” report documents results and conclusions of a study spanning two years (2007-2008) to evaluate and quantify fish mortality and injury at the State Water Project Fish Release Site at Horseshoe Bend. The report provides baseline data on the survival and injury of salvaged fish as they exit the release truck and travel down a nearly full-scale replica release pipe. It includes an evaluation of the hydraulic forces and debris loads associated with the release stage along with a series of recommendations designed to improve existing release sites and guide the construction of new release sites. The report is available at [http://baydeltaoffice.water.ca.gov/announcement/Element%203\\_FinalReport\\_7-10.pdf](http://baydeltaoffice.water.ca.gov/announcement/Element%203_FinalReport_7-10.pdf)

### **Release Site Predation Study**

“Release Site Predation Study” report documents results and conclusions of studies spanning two years (2007-2008) to evaluate and quantify fish mortality at the state and federal release sites for salvaged fish with an emphasis on the SWP Release Site at Horseshoe Bend. The report provides baseline data on the abundance, composition, and behavior of predators in the receiving waters at the release sites. It includes descriptions of the multiple survey methods including electro fishing and avian point counts to determine predator composition. The report also describes mark-recapture methods using Floy and acoustic tagging to determine site fidelity along with DIDSON and hydro acoustic sonar observations to determine predator behavior and abundance. The report describes a hypothetical predation risk analysis performed using a bioenergetics approach as part of the study and includes a series of recommendations designed to improve existing release sites and guide the construction of new release sites. The report is available at <http://baydeltaoffice.water.ca.gov/announcementElement2FinalReport52010.pdf>

### **Quantification of Pre-Screen Loss of Juvenile Steelhead in Clifton Court, Forebay Report**

“Quantification of pre-screen loss of juvenile steelhead in Clifton Court Forebay” report documents predation losses on juvenile steelhead within Clifton Court Forebay, and identifies potential management actions to reduce predation mortality of juvenile steelhead. The steelhead pre-screen loss investigation was a collaborative effort with participation from the Department of Fish and Game Fish Facilities Unit, USBR Fisheries and Wildlife Resources Group, and Hanson Environmental, Inc. The report is available at [http://baydeltaoffice.water.ca.gov/ndelta/fishery/documents/2009\\_clark\\_et\\_al\\_quantification\\_of\\_steelhead\\_pre-screen\\_loss.pdf](http://baydeltaoffice.water.ca.gov/ndelta/fishery/documents/2009_clark_et_al_quantification_of_steelhead_pre-screen_loss.pdf)

### **Georgiana Slough Non-Physical Barrier Project**

Under the Georgia Slough Non-Physical Barrier (NPB) Study, DWR proposes to implement a non-physical fish barrier where Georgiana Slough diverges from the Sacramento River. This study will evaluate the barrier’s effectiveness at keeping out-migrating Chinook salmon in the Sacramento River and preventing entrance into Georgiana Slough. Georgiana Slough diverges from the south bank of the Sacramento River and flows into the central Delta, and studies have shown that juvenile salmon that enter the central Delta rather than stay in the Sacramento River have much lower chances of survival. **Jacob McQuirk** of the South Delta Branch is the project manager of the Georgiana Slough NPB Study. For more information on this study, visit [http://baydeltaoffice.water.ca.gov/sdb/GS/index\\_gs.cfm](http://baydeltaoffice.water.ca.gov/sdb/GS/index_gs.cfm) ■

**Right:** Michele Johnson netting juvenile Chinook salmon to be implanted with acoustic tags.





# Central Valley Flood Protection Board Takes New Role

*By Jennifer Iida*

A name change isn't the only difference at the Central Valley Flood Protection Board (CVFPB) in recent years. Known as the State Reclamation Board since its creation in 1911, the CVFPB is an independent State agency that works very closely with DWR, the U.S. Army Corps of Engineers (Corps), and other State and local agencies to maintain and improve the flood management system for a majority of the Central Valley.

With the devastation from Hurricane Katrina and the increasing concern over the integrity of the levees in the Central Valley, California's legislators, in landmark 2007 legislation, strengthened the authorities and responsibilities of the Board and charged it with overseeing and approving much of the flood improvement work being done under the voter-approved 2006 bonds and additional 2009 legislation. Significant actions will include adopting the Central Valley Flood Protection Plan in 2012, tougher enforcement of unauthorized levee and river encroachments, and review of updated city and county general plans of those cities and counties currently within the area protected by Federal-State flood system in the Central Valley, lying along the most flood-prone portions of the two rivers.

Furthermore, the CVFPB has jurisdiction throughout the drainage area of the Central Valley and for flood maintenance activities of the local reclamation districts, which are separate independent agencies primarily responsible for maintenance of the flood control system.

## Team Effort

With the new name, responsibilities and authorities, came expansion of the staff to handle those tasks. The Board grew from a small staff to a reorganized agency of 24 employees, with further growth expected to continue.

"We have developed a superbly talented staff of dedicated engineers and environmental scientists to deal with a myriad of technical matters arising from proposed flood control project encroachments and modifications," said **Len Marino**, the Board's Chief Engineer.

Day-to-day staff duties include reviewing plans of permit applications received from individuals and agencies that want to build encroachments or modify the flood system in many ways. The Board receives about 200 encroachment applications annually and has issued over 18,000 permits. CVFPB

*Above: Central Valley Flood Protection Board staff standing near Sacramento River flood control project map.*



staff reviews the plans to make sure that the proposed encroachments and modifications comply with Board and Corps' engineering standards, environmental and State laws, and do not impact other areas.

Staff also works with DWR, the Corps, engineering firms and consultants, and other government agencies as partners to maintain and improve the flood management and flood control system in the Central Valley, which is vital to the state's economic well-being. The CVFPB is responsible for the oversight of maintenance of approximately 1600 miles of project levees, 1300 miles of designated floodways, several thousand acres of project channels, and about 55 other major flood works (such as bypasses, overflow weirs, flood relief structures, outfall gates and pumping plants).

"Development of flood control projects is a huge investment on behalf of the taxpayers" said Executive Officer **Jay Punia**. "Board members, coming from diverse backgrounds, discuss and debate the merits of projects coming before them in an open forum at their monthly Board meetings before approving or denying such projects, with the net result being that all of their knowledge and experience are brought into the mix to provide a balanced approach and, ultimately, a well thought out decision. They know that flood control projects will continue to provide protection to property and lives for a long time."

## Growing Needs

As California continues to grow, so does its need for flood management and other varied water and land uses. In addition to issuing encroachment permits and maintaining the integrity of the flood system, the CVFPB also has a vested interest in restoring environmental resources. CVFPB staff work closely with the Department of Fish and Game (DFG) and the U.S. Fish and Wildlife Service to minimize the impacts of flood works on fish and wildlife and, to develop habitat restoration projects. The CVFPB leases about 6,000 acres of its land to DFG for its management.

"We are always looking for opportunities to pair-up environmental enhancements with flood control system improvements in the projects reviewed by our Board," said Len. "In the past year, the Board approved two salmonid species spawning projects, including Liberty Island, which is now under construction, and Fremont Landing, on which construction will commence next summer. Board staff is working with our partners to bring in projects like these which restore riparian habitat without imposing a deleterious effect on the flood system conveyance."

## Major Progress in Area Flood Improvement

CVFPB has a direct role in several flood control projects now underway with the Corps. The Board also coordinated with the Corps regarding the necessary approvals for major flood modification projects that were funded by bonds approved under Propositions 1E and 84 and built by local agencies.

For example:

1. Sacramento Area Flood Control Agency's Natomas Levee Improvement Program, which consisted of constructing and strengthening the levees protecting the Natomas Basin in Sutter and Sacramento Counties to eventually achieve 200-year flood protection;
2. Three Rivers Levee Improvement Authority's levee improvement project, consisting of strengthening and constructing setback levees along the Feather River, Yuba River, Bear River, and Western Pacific Interceptor Canal in Yuba County to achieve eventually 200-year flood protection; and
3. West Sacramento Area Flood Control Agency's levee improvement program, consisting of strengthening and modifying the levees protecting the City of West Sacramento to achieve eventually 200-year flood protection.

## Future Plans

The long-term integrity of the Sacramento and San Joaquin Rivers Flood Control System is vitally important to flood management in California. The levees, weirs, bypasses, and other features of the system protect more than three million people and an estimated \$47 billion in property.

Overall, the system functioned adequately during recent high water incidents, but some levees showed signs of stress placed upon them by unusually high flows and a couple of levees failed. As a result, attention is now focused on the system's deficiencies and problems. Ways to ensure continued



Jay Punia, CVFPB Executive Officer since 2006, has also worked 26 years for DWR in flood management, planning and operations and maintenance.



*Left to Right: CVFPB Engineers Curt Taras and Angeles Caliso inspect the Feather River Setback Levee Project under construction by the Three Rivers Levee Improvement Authority.*



*CVFPB Engineer Deb Biswas with Shelby tube, which is used to collect relatively undisturbed clay soil samples during field investigation for further strength analysis in the laboratory.*

effectiveness of the system must be undertaken, especially in view of the rapid population growth and attendant development that is pressing on flood-prone parts of the Central Valley.

The Federal management agencies have determined that problems such as levee underseepage and slope failures apparently arise from the inadequacy of the historical construction techniques and materials used in some of the original levees. For example, inspection of levees in the Sacramento urban area, completed recently, disclosed that several miles of levees examined would require repair to bring the project up to original design specifications and standards. Strengthened levees will protect lives and preserve property values, as well as protect the environment from flood damage.

The CVFPB is dedicated to providing the Central Valley with the highest possible level of flood protection through a program of environmentally sound structural and nonstructural measures, balanced with extensive public involvement. The Board will continue to furnish the active leadership that will ensure the Sacramento and San Joaquin Rivers Flood Control System goes on functioning properly, and will increase the level of protection where needed throughout the Central Valley. The CVFPB is now busy working on future critical responsibilities such as approving and adopting the Central Valley Flood Protection Plan by July of 2012.

“The Board’s goal is to develop a plan that would be acceptable to the Board and other stakeholders including flood control and resource management interests,” said Jay. “We look forward to continuing the collaborative work with DWR, the Corps, and local levee maintaining agencies, to improve the flood control system in the Central Valley.”

## **Marysville Ring Levee Project**

A few months ago, the energy that makes up the CVFPB reflected a remarkable level of collaboration by local, State and federal agencies. The Corps, DWR and the CVFPB broke ground on Phase One of a project to strengthen the 7.6 mile long Marysville Ring Levee on the Yuba and Feather Rivers. The bulk of the funding for this greatly anticipated project comes from American Recovery and Reinvestment Act funds.

When this four-phase project is complete, Marysville will be one of the few cities in California’s Central Valley with more than a 250-year level of protection, meaning there is a one-in-250 chance of flooding in any given year.

Yuba County Officials are hoping the increased flood protection will spark a boost in economic development for new businesses.

The three subsequent phases will begin over the next three years and are scheduled to be completed by fall of 2013. ■

*Left: Yolo Bypass*





# Gianelli Pumping-Generating Plant Butterfly Valve Removal Project

After 46 years of regulating water flows to and from San Luis Reservoir, the 95 ton Unit 5 Butterfly Valve at William R. Gianelli Pumping-Generating Plant was removed on December 1 for its first maintenance.

"In April of 2009, it was discovered on the Unit 5 valve that one of the stems that holds the internal valve leaf in place had come loose and was migrating outward from the disc," said **Rob Dunlop**, Senior Hydroelectric Power Utility Engineer at San Luis Field Division. "This unit was forced out of service until arrangements could be made to take it apart and make necessary repairs. San Luis field division personnel worked closely with headquarters personnel and contractors to prepare the valve for removal. Due to the lead paint coating on the valves from the plant's initial construction, lead abatement was accomplished to the exterior surfaces of the valve."

Located about 12 miles west of the city of Los Banos, Gianelli Pumping-Generating Plant, part of the San Luis Joint-Use Complex, pumps water from O'Neill Forebay into San Luis Reservoir. The pumping plant has eight pump generators with eight corresponding butterfly discharge valves.

The valve is connected to an extension tube pipe on one side and a penstock pipe on the other side. With the inside leaf diameter of 13 feet, the major valve components include the upper body, valve leaf and bearing carrier assembly, and the lower body. In addition, there is a hydraulic cylinder with stem and linkage assembly to actuate the valve.

"San Luis mechanics performed the difficult tasks of removing the hydraulic equipment, removing flange and body fasteners, removing pipe dresser coupling seals and positioning the valve components for removal," said Rob.

Located on the bottom floor of the plant and approximately 50 feet below the surface of the outside deck, the valve removal, which took 16 hours to complete, was a very large undertaking that required work from more than 22 DWR staff in conjunction with outside contractors. With a 120-ton hydraulic crane and three trucks with trailers and special fixture to support valve leaf assembly, the removal process

*Left to Right: San Luis Field Division's HEP Mechanic Brent Ingram, HEP Mechanic Sean Marsh, Apprentice Matt Darling, HEP Mechanic II Don Price, HEP Mechanic Rick Alamo, HEP Mechanic Ron Rushing and Senior HEP Engineer Rob Dunlop (center) standing on the bottom half of the Gianelli butterfly valve that was removed. Photo by Anthony Ramirez.*



Upper half of butterfly valve being hoisted out of the Gianelli Plant. Photo by Anthony Ramirez

consisted of three major crane picks including the 20-ton valve upper body, 37-ton leaf and stem assembly, and 35-ton lower body.

San Luis Field Division crew of six mechanics and four crane company workers performed the bulk of the rigging and set up work for each valve component. Other San Luis Field Division staff included two electricians, three utility craftworkers, and two plant operators.

"In order to remove the valve components from the plant, 230 KV power lines coming into the plant transformer adjacent to the valve hatch opening had to be removed to allow crane access. DWR worked closely with PG&E to accomplish this task," said Rob. "In addition, an adjacent transformer had to be de-energized as a safety precaution during crane operations.

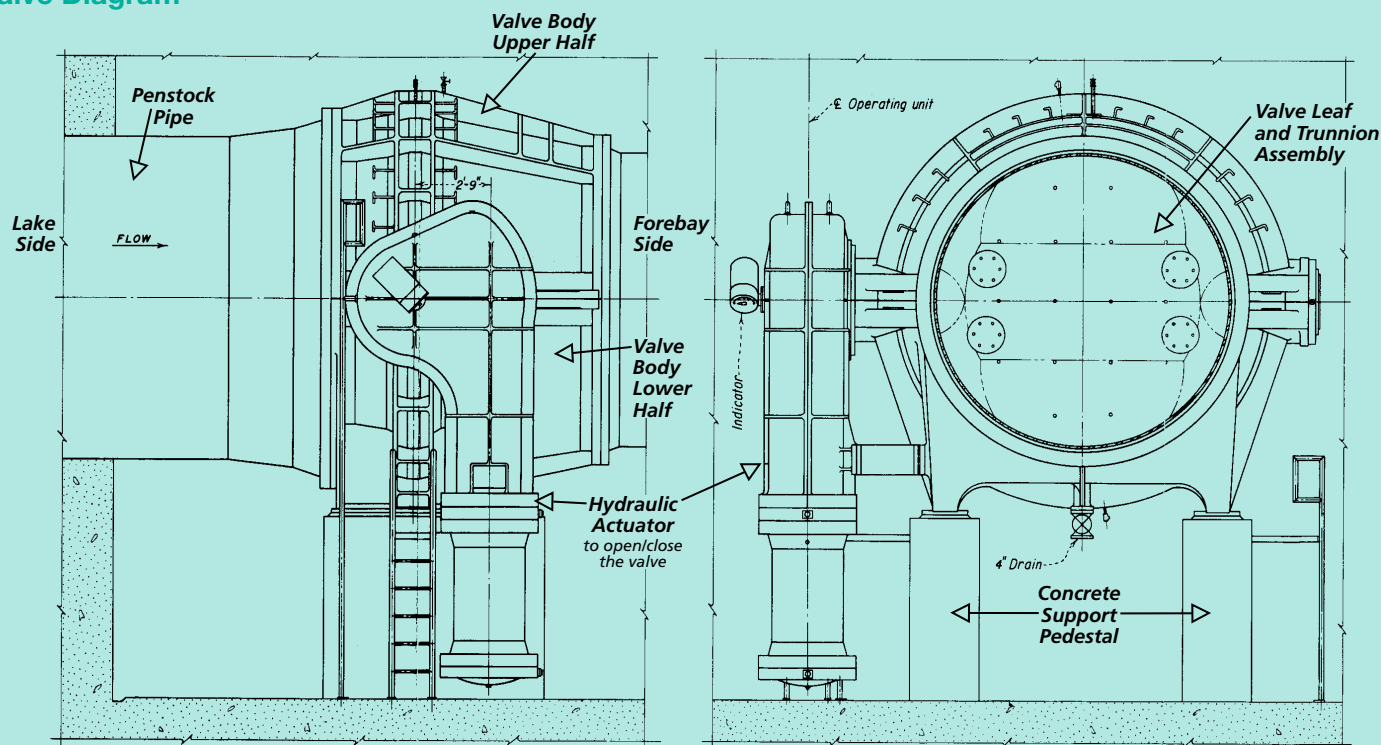
Initiated in June of 2009 with the project's planning phase, the actual work on the valve removal began in August of 2010 and was completed December 1, 2010.

As the final step in the removal process, a 15-ton bump head was installed in December of 2010 to temporarily replace the valve and allow the penstock to be watered up to run the adjacent pump/generator.

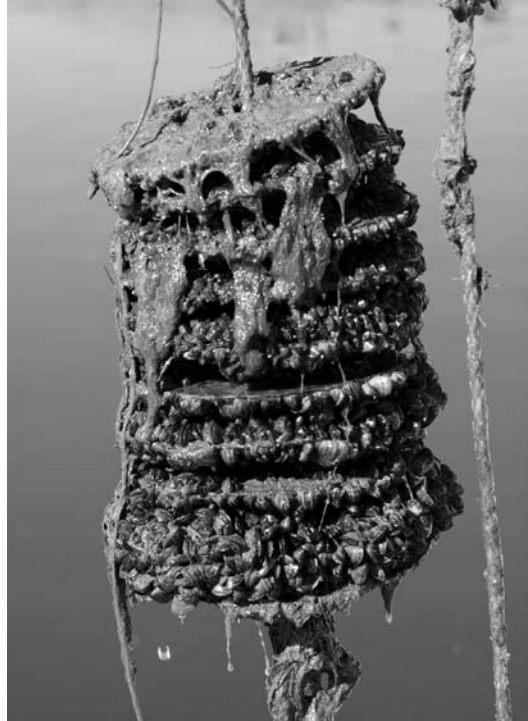
"The valve components will be sent to an outside shop for refurbishment and reinstalled upon completion of the repair process," said Rob. "A value engineering team has been assembled to come up with the most cost effective path to take in the long term repair and or replacement of the remaining valves at the plant."

The San Luis Field Division staff is commended for their hard work and ingenuity in safely accomplishing this work. Special thanks to Gianelli's Unit 5 Butterfly Valve Removal Project team of mechanics (Don Price, Rick Alamo, Brent Ingram, Ron Rushing Jr, Sean Marsh, Matt Darling), electricians (Ron Bristow, Brian Baker), Utility Craftworkers (Cody Nelson, Daryl Caetano), supervisors (Ron Pereira, Tony Lemus, Larry Carmo), Engineering (Rob Dunlop, Mandeep Bling, Francisco Valencia, Ravi Sharma), Plant Operators (Tim Salcido, Paxton Roberts), Safety (Bill Collins, Kurt Hess), Planning and Scheduling (Bob Wirth, George Gongora, Kevin Nelson, Adam Souza and Anthony Ramirez) and Field Division Chief Jim Thomas ■

## Valve Diagram







# Scientists Spearhead DWR's Defense Against Invasive Quagga, Zebra Mussels

By Pete Weisser

January 2011 marks four years since quagga mussels were first reported in Lake Mead. While the invasive mussels soon spread via Colorado River water diversions into 23 waterbodies in Southern California, the State Water Project, fed by Sierra runoff, thus far remains quagga-free.

DWR scientists lead the effort to defend against quagga, and zebra mussels, a similar foreign invader, which so far has been found in just one isolated Central California reservoir. Early detection monitoring is conducted throughout the State Water Project, rapid response and long-term mussel management plans are ready and expert consultants are available to help DWR safeguard the SWP from the mussels which can clog small diameter pipes and harm the food web in lakes and reservoirs.

Scientists **Jeff Janik** and **Tanya Veldhuizen** are key staffers for DWR's Aquatic Nuisance Species (ANS) Program in the Division of Operations and Maintenance, which operates California's State Water Project (SWP).

## Monitoring the SWP for Invaders

Jeff and Tanya coordinate early detection monitoring for quagga and zebra mussels throughout the SWP. Coverage includes Frenchman, Davis and Antelope Lakes in the Upper Feather River system, Lake Oroville, North Bay Aqueduct, Sacramento-San Joaquin Delta, Banks Pumping Plant --- the

intake point for the California Aqueduct--- Bethany Reservoir, Lake Del Valle, San Luis Reservoir, and the Southern California SWP reservoirs, Pyramid, Perris, Castaic and Silverwood. They have trained dozens of DWR staffers to recognize quagga and zebra mussels and monitor for their presence in the SWP.

From April through October, the most active period for quagga activity, sampling is done weekly or twice monthly. From November through March, sampling decreases to monthly, with the exception of Banks, which remains at a weekly pace.

Since 2007, when DWR began monitoring for larval and adult quagga and zebra mussels, about 750 samples have been analyzed. About 300 samples were analyzed in 2010. No mussel populations have been detected.

Jeff and Tanya in July 2010 completed an 18-month study to evaluate growth and mortality of zebra mussels in San Justo Reservoir near Hollister. (Zebra mussels were discovered there in January 2008, about a year after quagga mussels were detected at Lake Mead. It is the only zebra mussels infestation in California, to date.) Tanya reported the results at the 17th Annual International Conference on Aquatic Nuisance Species held in San Diego in September.

*Left to Right: At San Justo Reservoir, Tanya Veldhuizen collects zebra mussel larvae (veligers) in plankton net tow. Zebra mussels attached to substrate constructed of CDs. Jeff Janik prepares to measure adult zebra mussels.*

One of their findings points to the importance of pH (acidity) in regulating calcium, an essential element of mussel growth. Their results provided a basis to begin a re-evaluation of environmental conditions, both hostile and nurturing, for mussels in the SWP. In addition, the scientists developed a poster, with help from DWR Graphic Designer **Cordi McDaniel**, to provide a visual summary of DWR's SWP invasive mussel monitoring program. (A map from that poster appears with this article.)

### DWR Hires Expert Mussel Consultant

To provide a high level of scientific expertise on mussel control strategies, DWR in July 2010 hired a consulting firm with extensive international experience, RNT Consulting, Inc. of Ontario, Canada, to a five-year contract. The firm has done invasive species detection, monitoring and control in the U.S., Europe and South America. RNT's Chief Scientist, **Renata Claudi**, who is familiar with the SWP, has co-authored four books on invasive mussels, including the most comprehensive manual published to date on detection, monitoring and control methods. RNT will provide valuable technical assistance as DWR continues its mussel defense efforts in future years.

Much of DWR's research now focuses on identifying more precisely water conditions that are conducive or hostile to invasive mussel survival. Findings from this research will be presented in June 2011 at the next HydroVision International Conference, to be held in Sacramento. **Carl Torgersen**, Chief of DWR's Operations and Maintenance, made a brief presentation on DWR's mussel control program at the 2010 conference in North Carolina.

Response plans for a mussel infestation in the SWP have been prepared. The Vector Management Plan is now pending the outcome of negotiations with the State Department of Parks and Recreation aimed toward expanding the boat inspection program implemented at Silverwood and Perris to other SWP reservoirs.

Boat inspections are a vital tactic in safeguarding water systems from mussel infestation by boats trailered from lake to lake by recreationists. Some level of boat inspection is ongoing at five SWP reservoirs (Oroville, Del Valle, Silverwood, Perris and Castaic.)

DWR and State Parks are conferring on an expanded boat inspection program, depending upon available funding. The expanded program would build on a two-year pilot program at Perris and Silverwood, funded by over \$1.4 million in the 2008-2009 State Budget, via the Department of Boating and Waterways.

### Mussel Management Includes Public Outreach

DWR is a vigorous partner in statewide mussel response efforts, led by the Department of Fish and Game (DFG). DFG Biologist **Susan Ellis** leads the multi-agency State response effort. All California Natural Resource Agency departments are involved with and coordinate activities regarding zebra and quagga mussels.

Jeff and Tanya work closely with other water agencies in this effort, especially with the Metropolitan Water District of Southern California, which has conducted an extensive mussel control program since quagga mussels appeared in California in 2007. DWR also coordinates on mussel management efforts with Federal agencies, including the U.S. Bureau of Reclamation and the U. S. Fish and Wildlife Service.

Public outreach via the news media, boating organizations and water recreationists helps spread the message for boaters to "clean, drain and dry" their trailered boats to thwart the spread of mussels. Displays and information booths are planned for winter season recreation expositions and boat shows. The spring 2011 opening of boating season, typically in May, will be a busy time for outreach.

### New Approach to an Ultimate Solution

On new approaches to mussel control, Jeff reports that a Davis-based bio-research firm, Marrone Bio Innovations, has developed a bacterial product, called Zequanox, with potential for biological control of invasive mussels.

The product is a harmless bacterial species (*Pseudomonas fluorescens*) that is found protecting the roots of land-based plants from plant diseases. However, when a quagga or zebra mussel ingests artificially high densities of these bacteria, they destroy the digestive systems of the mussels.

Marrone Bio Innovations and the U.S. Bureau of Reclamation plan to conduct field studies of Zequanox, studies authorized by state regulatory agencies in Arizona and Nevada. The product will be tested at the Bureau's Davis Dam on the lower Colorado River, where supply lines are heavily infested with quagga mussels. According to Janik, research trials are currently underway to optimize the produce formulation and perfect its mode of delivery.

Full regulatory approval of Zequanox by the U.S. Environmental Protection Agency and the California Department of Pesticide Regulation is expected early next year. The Bureau of Reclamation is planning the first large-scale use of the product next spring to control quagga mussels at Davis Dam on the lower Colorado River. ■





Zebra mussels in the San Justo Reservoir, which is part of the Federal Central Valley Project.

## State Water Project Monitoring Stations Map



*Below: Tanya Veldhuizen and Jeff Janik collect zebra mussel veliger samples at San Justo Reservoir to determine mussel spawning patterns. Veligers are captured by towing a plankton net behind a boat.*







# San Joaquin River Renewed Flows Dramatized 2010 Restoration Progress

By Pete Weisser

In 2010, the San Joaquin River flowed as a continuous river from Friant Dam to the Delta, a distance of more than 330 miles. This complete-river flow was the first in more than 50 years, except for flood years.

Continuous flows began reaching the Delta in March and continued through the summer. Typically, low summer flows in a river heavily tapped for agricultural irrigation and cities' water supplies left miles of riverbed dry.

The San Joaquin's watery renewal was achieved with carefully calibrated releases from Friant Dam, a Federal dam near Fresno, to enable scientists and engineers to study the flows. It's a key part of an ambitious multi-agency river restoration program aimed at revitalizing California's second longest river and introducing a long-term salmon population.

News media outlets from Fresno to San Francisco hailed the renewed flows as historic and symbolic of the San Joaquin's renaissance and potential for a healthier future. The San Francisco Chronicle and Fresno Bee published enthusiastic feature articles during the summer.

"River's flow to ocean strong sign for San Joaquin rebirth" proclaimed a Fresno Bee headline on August 23.

During July, KGO-TV and KQED-TV, both in San Francisco, broadcast comprehensive reports on the river's renewal and

the program designed to achieve it. Initial flows began in 2009 and were adjusted and refined during 2010.

## Historic Year for San Joaquin River

"It's been a historic year in the project to restore the San Joaquin River," said KSFN-TV (Fresno) reporter Gene Haagenson. He covered an Oct. 1-2 San Joaquin River Partnership conference in Fresno that marked program efforts and achievements with presentations and discussions.

Representing Natural Resources Secretary Lester Snow at the conference, **Paula Landis**, Division of Integrated Regional Water Management Chief with lengthy San Joaquin River experience, provided a policy-level perspective.

The San Joaquin River Restoration Program ranks as the most ambitious river restoration project in the nation. The program seeks to implement a 2006 Federal court agreement that settled an 18-year lawsuit over use of San Joaquin water.

The program has two goals: To reduce or avert adverse water supply impacts to Friant Dam water users and to restore and maintain fish populations in the San Joaquin, from Friant Dam downstream about 150 miles to its confluence with the Merced River.

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*Above: San Joaquin River at Lost Lake Recreation Area.*



## State-Federal Partnership Effort

Three federal agencies and two State departments are involved in the program. The U.S. Bureau of Reclamation is the lead federal agency, with technical expertise provided by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. DWR and the Department of Fish and Game are the program's State partners.

During the summer of 2010, program officials and stakeholders provided insight and perspective in news media interviews.

**Ron Jacobsma**, who leads the Friant Water Users Authority, farmers who use Friant Dam water for irrigation, stresses that his members are "concerned about the water management goal aspects of the settlement," especially in the long term. In wet years, there will be ample water. Dry years may pose challenges. During 2010, California's above-average precipitation assured sufficient water for the restoration program's water operations.

**Jason Phillips** of the Bureau of Reclamation noted that progress was made during 2010 toward both the water management and fish restoration goals. (Phillips, the program director since its inception, accepted a new assignment in January 2011 as Area Manager of the Bureau's Klamath Basin Area Office in Klamath Falls, Oregon. The Bureau expects to select his replacement during 2011.)

## Salmon Restoration Looms in 2012

In regard to fish, **Gerald Halter** of the Department of Fish and Game said: "The goal is to have a naturally reproducing, self-sustaining population of Chinook salmon --- spring and fall

run." The settlement requires the reintroduction of salmon to the San Joaquin River mainstem between Friant Dam and the confluence of the Merced River by December 31, 2012.

Higher media visibility of the San Joaquin flows this summer had one tangible result. The Water Education Foundation's third annual tour of the San Joaquin restoration area, conducted on Oct. 13-14, was quickly sold out.

In November, the State Water Resources Control Board held a Sacramento workshop to update Board Members and staff on the restoration program's progress during 2010 and the challenges ahead in 2011 and 2012. At that workshop, Monty Schmitt, senior water resources scientist with the Natural Resources Defense Council, called the program thus far "a success story for California."

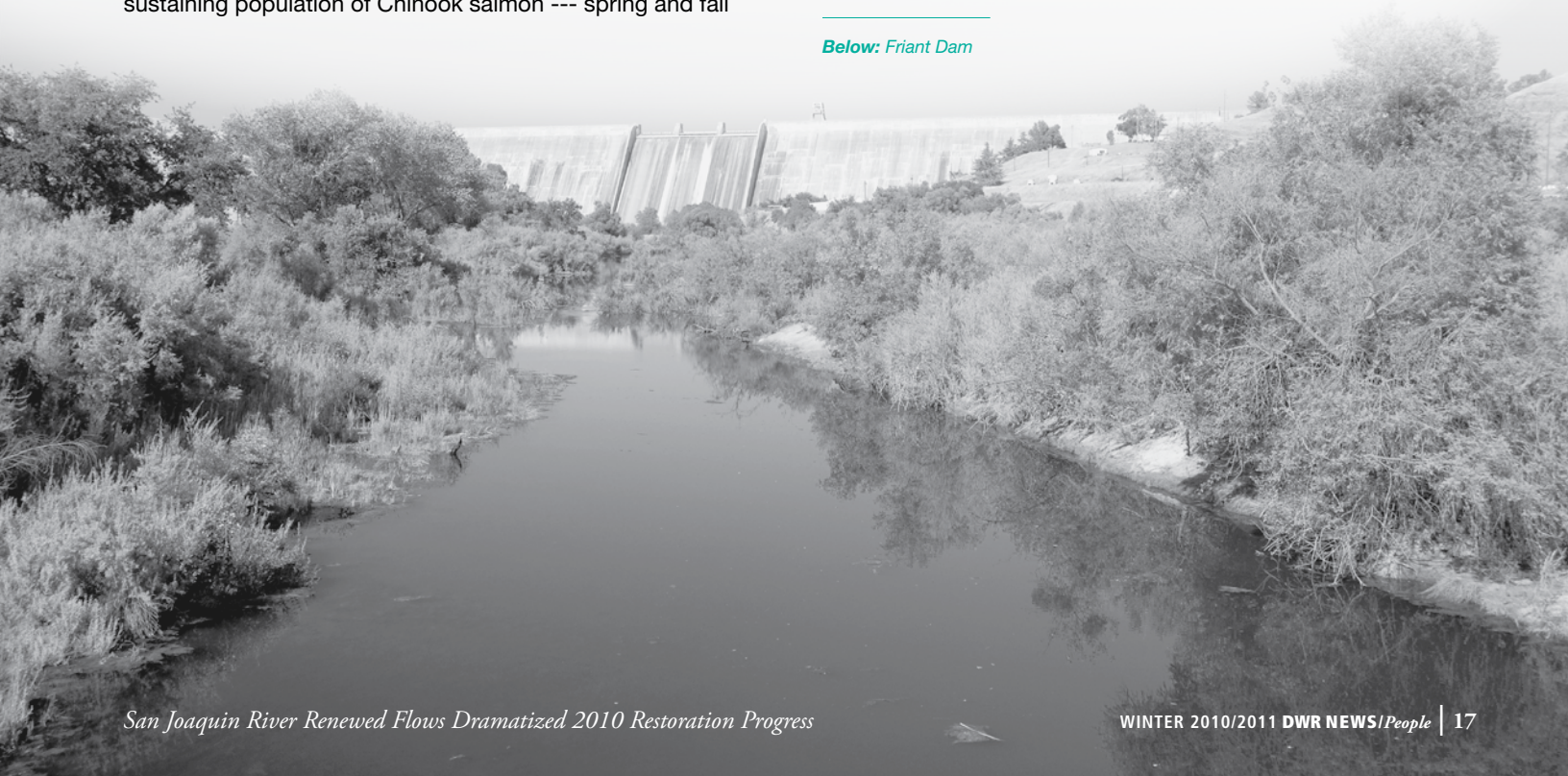
A Draft Program EIS/R document is scheduled for release in early 2011, after months of extensive preparation. A series of public meetings will follow to gather comments on that planning document and answer questions from stakeholders and interested members of the public about the program.

Currently, DWR experts are working on important environmental permitting and surveys, flood control and fish passage aspects of the program.

**Kevin Faulkenberry**, P.E., Chief, River Restoration and Environmental Compliance Branch at DWR's South Central Region Office in Fresno, outlined key topics in a presentation at the San Joaquin Partnership Conference in early October, 2010. These included aspects of channel capacity, flood management, seepage and fish habitat at key river locations. ■

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*Below: Friant Dam*





IN THE  
SPOTLIGHT

## Delta Field Division

Marking the beginning of the California Aqueduct, Delta Field Division's 132 employees cover the expanding needs of five pumping plants, four reservoirs, four dams, two major environmental protection projects, and spans 115.6 miles from three aqueducts.

With a \$30 million annual budget, Delta Field Division's (DFD) coverage includes the SWP facilities of North Bay Aqueduct, Barker Slough Pumping Plant, Cordelia Pumping Plant and Forebay, Napa Turnout Reservoir, South Bay Aqueduct, South Bay Pumping Plant, Patterson Dam and Reservoir, Del Valle Pumping Plant, Del Valle Dam and Lake, Santa Clara Terminal Reservoir, Suisun Marsh Salinity Control Gates, Clifton Court Forebay and Dam, Harvey O. Banks Pumping Plant, John E. Skinner Fish Protective Facility, Bethany Dams and Reservoir.

From Control System Technicians to Hydroelectric Plant (HEP) Electricians, Mechanics, and Operators, DFD offers a variety of assignments at their various SWP facilities. Unlike other field divisions, DFD's Utility Craftworkers operate boat locks at the Montezuma Slough Salinity Control Structure and salvage fish at the John E. Skinner Fish Protective Facility. As the fifth DFD Chief, **David Duval** has worked at DWR for 25 years and has been DFD Chief since 1999.

"The variety of work provides endless learning opportunities," said HEP Operations Superintendent **Doug Thompson**, who has worked at DFD for almost 20 years. "One day, we can be handling water allotments or refurbishing of equipment. On another day, we could be providing maintenance on the aqueduct or handling water quality concerns."

To help protect the environment, Delta Field Division staff operates and maintains the Suisun Marsh Salinity Control Gates, a water quality control structure, and the John E. Skinner Fish Protective Facility, a fish salvage operation. During periods of low Delta flow, the Suisun Marsh Salinity Control Gates, located at the eastern end of the Montezuma Slough in the Sacramento-San Joaquin Delta, near Collinsville, maintain proper salinity levels in the Suisun Marsh.

"In operation since 1989, the Suisun Marsh Salinity Control Gates protect one of the largest contiguous brackish water marshes in the nation," said Doug.

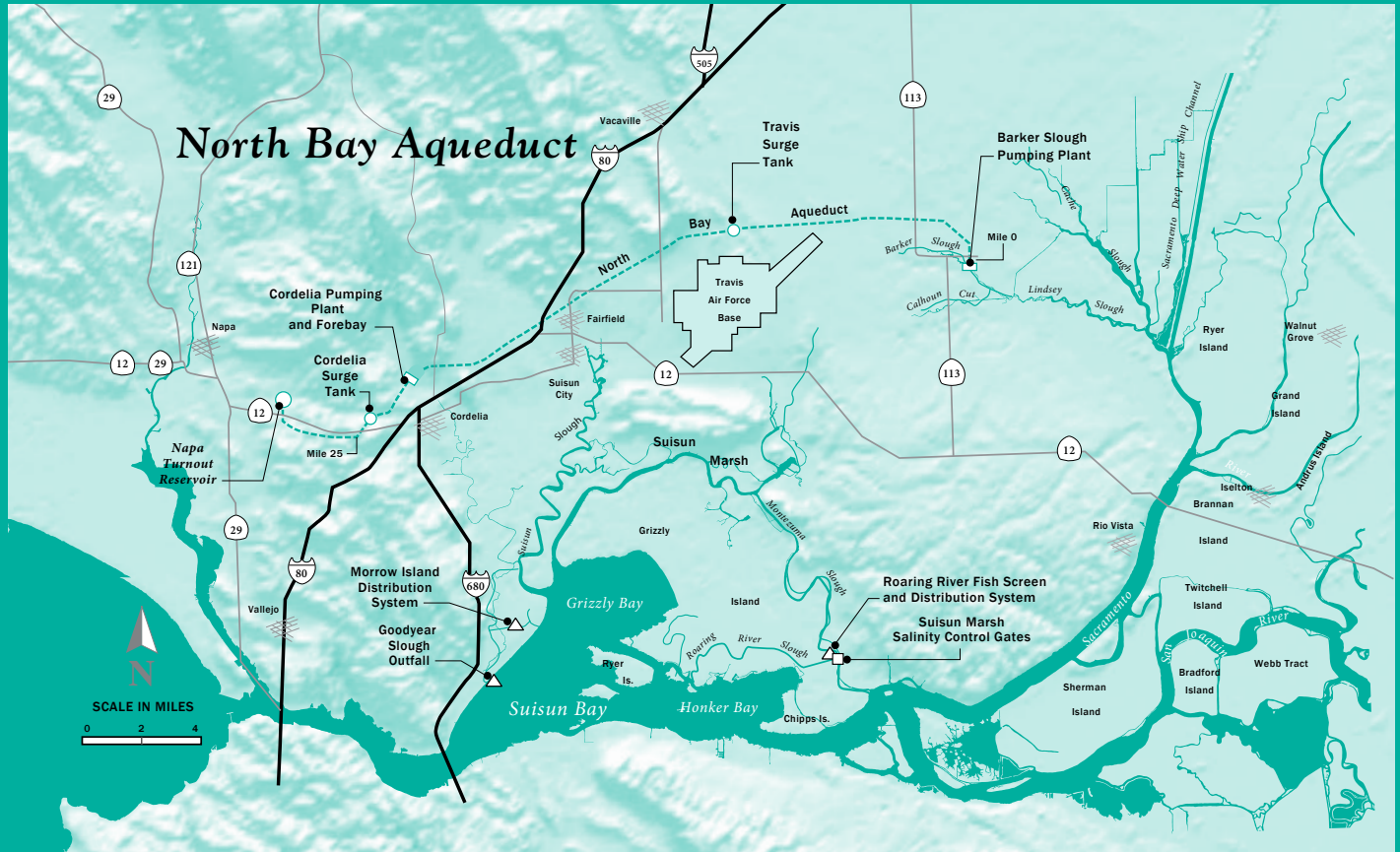
Located in the southern portion of the Sacramento-San Joaquin Delta, about 20 miles southwest of the city of Stockton, Harvey O. Banks Pumping Plant was completed in 1969 with four additional pumps added in 1992 for a total of 11 pumps. Banks Pumping Plant lifts Delta water 240 feet into Bethany Reservoir, which serves as a forebay for South Bay Pumping Plant and afterbay for Banks Pumping Plant.

To protect fish from the pumps at Banks Pumping Plant, Skinner Fish Facility has been operating 24 hours per day and 365 days a year since 1968. Located between Clifton Court Forebay and Banks Pumping Plant, Skinner Fish Facility staff helps fish by removing them from the intake channel, collecting, and releasing live fish to the Delta at two locations on the Sacramento and San Joaquin Rivers. On a busy day, 250,000

*Left to Right: Of Delta Field Division's 132 employees, staff include HEP Operations Superintendent Doug Thompson, Assistant Chief Planner Scheduler Diana Gillis and Utility Craftworker Supervisor Amber Candela-Cooney, and Materials & Stores Specialist James Matsuda of the warehouse. Photos by Michael Miller.*



# Delta Field Division





Utility Craftworker Cliff Pettyjohn at Suisun Marsh Salinity Control Gate structure.



to 500,000 fish are processed through Skinner's screens, pipes, and tanks.

"If we're not pumping water, we're not salvaging fish," said Doug. "Without Skinner Fish Facility, Banks Pumping Plant would not exist."

With a staff of 46 Utility Craftworkers, Delta Field Division covers a total of 69 miles for the North Bay and South Bay Aqueducts. They also operate 66.7 miles and maintain 46 miles of the California Aqueduct.

Located north of San Francisco, North Bay Aqueduct's (NBA) 27.6 miles of underground pipeline and facilities extend from Barker Slough Pumping Plant in the Delta to the end of the Napa pipeline at the Napa Terminal Tank.

Constructed in two phases and completed in 1988, NBA provides supplemental agricultural and industrial water supplies to Napa and Solano counties.

From the Delta, water is pumped at Barker Slough Pumping Plant through pipeline to Travis Surge Tank then to Cordelia Pumping Plant.

Starting at Bethany Reservoir, near Tracy, and ending in San Jose, South Bay Aqueduct (SBA) consists of two pumping plants, two dams, three reservoirs, 1.8 miles of tunnel, 10.8 miles of canals and 31.8 miles of pipeline.

With deliveries since 1962, SBA is the first delivery system completed in the State Water Project. Lake Del Valle located in the Diablo Mountain Range provides recreation with fish and wildlife enhancement, flood control for Alameda Creek, and regulatory storage for a portion of the water delivered through SBA.

As a water conveyance system for Alameda and Santa Clara counties, SBA is currently being enlarged to include a 450-acre-foot Dyer Reservoir along with four and a half miles of pipeline connecting to South Bay Pumping Plant and a new surge tank for controlling water pressure. The enlargement will also include four additional 45 cfs pumps.

Along with the completion of SBA's enlargement in 2011, DFD staff looks forward to the completion of the Delta-Mendota Canal and California Aqueduct Intertie Project, which will improve the reliability of water supplies for water users south of the Delta. ■

Utility Craftworkers Cindy Schut and Dan Mendoza at Skinner Fish Facility.



Left: HEP Mechanic Apprentice Kyle Morris at Banks Pumping Plant



## Solano County Water Agency

Covering all 900 square miles of Solano County and a small part of Yolo County, Solano County Water Agency (SCWA) maintains the reliability of existing federal Solano Project and State Water Project water supplies.

“SCWA is also somewhat unique among State Water Project Contractors in that we supply large amounts of both agricultural and urban water supplies,” said General Manager David Okita.

Along with ensuring water supply by working with the member agencies to promote water use efficiency and conjunctive use of the groundwater basin, SCWA is also responsible for operations and maintenance of the Ulati and Green Valley Flood Control Projects.

To help ensure the water supply for a population of 428,000, SCWA wholesales water to the cities of Vallejo, Benicia, Fairfield, Vacaville, Suisun City, Solano Irrigation District, and Maine Prairie Water District. SCWA also supplies water to the University of California, Davis and State Prisons. With 141,000 acre-feet per year from the Solano Project, Solano Irrigation District has the largest annual entitlement of the SCWA.

Home to the rolling hillsides, waterfronts and fertile farmlands, Solano County farmlands are also known for their fruits, nuts, vegetables, grains, seeds, sheep, and lambs. Located at the center of the expanding metropolitan areas of the Bay Area to the west and Sacramento to the east, the cities along the Highway 80 corridor from Dixon to Vallejo are experiencing rapid urban growth and the need for reliable water supplies. Through the water supply via the Solano Project and State Water Project, SCWA strives to meet these growing needs.

### The History

“Solano community leaders in the 1950’s and 1960’s made, at that time, risky and bold decisions to secure long term water supplies from the federal Solano Project and the State Water Project to meet long term water needs,” said Okita. “These water supplies have provided the foundation for the economic development of the County and continue to provide for a very reliable water supply, less impacted by shortage than other parts of the state. Because of this, we can concentrate on water use efficiency and longer term supply augmentation projects rather than having to address perennial shortages.”

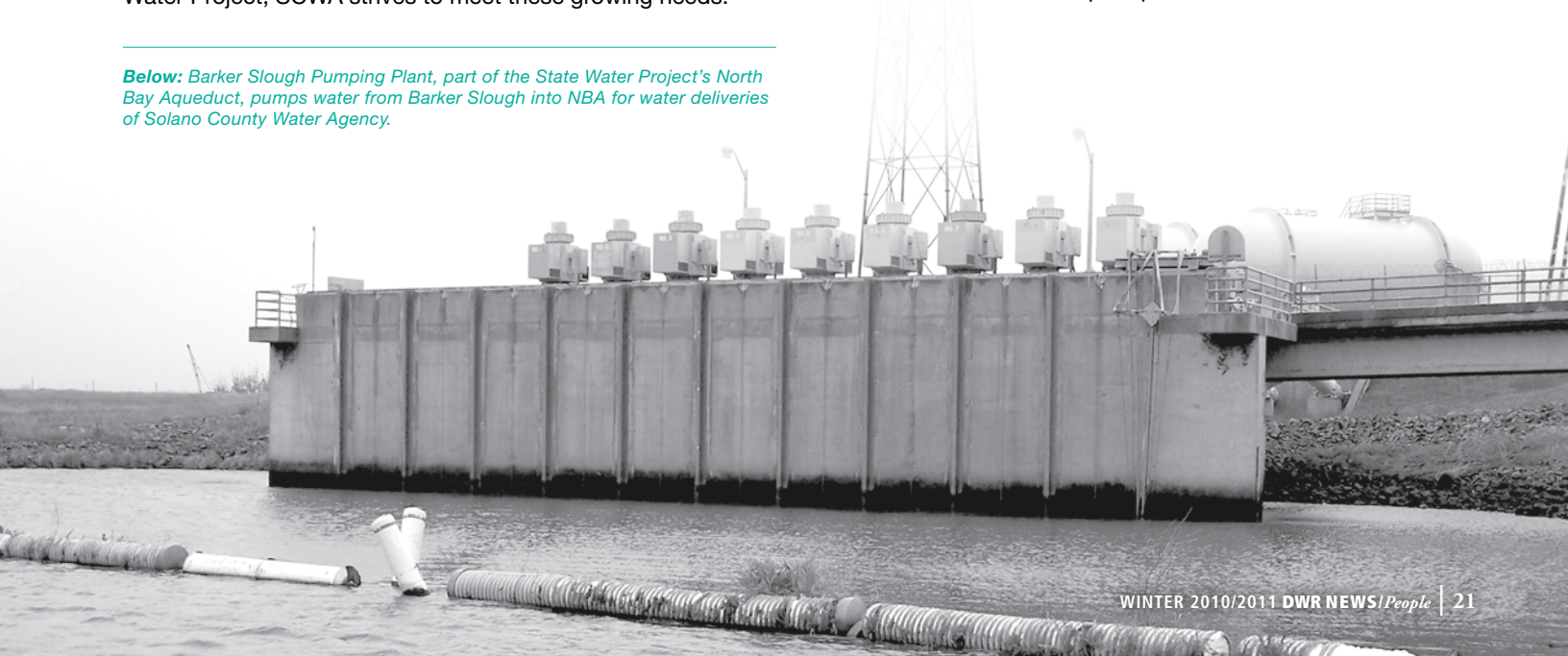
After being created in 1951 by an act of the State Legislature as the Solano County Flood Control and Water Conservation District, the name was changed in 1989 to the Solano County Water Agency. In October of 1989, the governing board was modified and SCWA hired Okita as its first employee and General Manager. A year later, more employees were hired. With a budget of \$29 million in 2011, SCWA staff currently consists of 13 employees for the office and contract field crews, which operate and maintain the Solano Project and their flood control facilities.

The SCWA governing board consists of five members of the Board of Supervisors, mayors from all seven cities in Solano County, and a board member from each of the three agricultural irrigation districts (Solano Irrigation District (SID), Maine Prairie Water District and Reclamation District No. 2068).

### North Bay Aqueduct

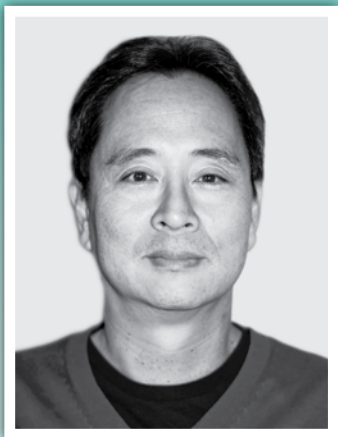
Part of the State Water Project (SWP), North Bay Aqueduct (NBA) is a 27-mile underground pipeline located north of the San Francisco Bay that extends from Barker Slough in the Delta to the end of the Napa Pipeline.

**Below:** Barker Slough Pumping Plant, part of the State Water Project’s North Bay Aqueduct, pumps water from Barker Slough into NBA for water deliveries of Solano County Water Agency.



*“We support the efforts of the Contractors and the Department to protect the water supply of the State Water Project, but as a Northern California and a Delta area water agency we also have a perspective that the Delta must be protected and Northern California water rights respected.”*

**David Okita**, SCWA General Manager



As SCWA General Manager for 21 years, David Okita has also been an active member of the State Water Contractors, serving on the Board of Directors for 21 years.

Prior to SCWA, Okita worked 11 years at Contra Costa County in various engineering positions. His last assignment was as Assistant Director in the Community Development Department.

Okita earned his Bachelor of Science degree in Civil Engineering from the University of California, Davis, and a Masters of Public Administration from California State University, East Bay. He is a licensed Civil Engineer in California.

A resident of Davis, Okita and his wife Theresa have two adult children. In his spare time, he enjoys following the World Series Champion Giants, abalone diving and visiting his kids.

“NBA provides SCWA with 20 percent of its overall water supply and about 50 percent of urban supplies and is the source for future urban growth,” said Okita.

NBA, which was constructed in two phases with the second phase completed in 1988, provides supplemental water supplies to Napa and Solano counties. At Barker Slough Pumping Plant, water is pumped from the Delta through a pipeline to Travis Surge Tank then to the Cordelia Pumping Plant. Via two turnouts, deliveries are made to Travis Air Force Base and the Solano County cities of Fairfield and Vacaville. Through Cordelia Pumping Plant’s discharge pipelines, water is delivered to Benicia, Vallejo, and Napa Turnout Reservoir.

The NBA contracting cities are Benicia, Vacaville, Fairfield, Vallejo, Suisun City, Rio Vista, and Dixon. Although there is currently no facility to deliver NBA water, Suisun City has an allocation of NBA water and cities of Rio Vista and Dixon have the right to obtain a specified amount of NBA water in the future.

SCWA has contracted for an ultimate allocation of 47,756 acre-feet of water per year from the SWP. This amount includes 5,756 acre-feet of additional SWP water per year that SCWA purchased on behalf of the cities of Fairfield and Vacaville from the Kern County Water Agency, another SWP contractor, in 2001.

## Solano Project

With storage of 1.6 million acre-feet of water in Lake Berryessa for delivery throughout the region, the Solano Project began delivering water in 1959.

The Solano Project, which cost \$38 million to construct, currently provides about 80 percent agricultural water and 20 percent urban water for SCWA. As part of this project, Monticello Dam captures water from Putah Creek in Lake Berryessa. Putah Diversion Dam diverts water out of Lower Putah Creek just downstream of Monticello Dam, and Putah South Canal delivers water to local agencies.



Located east of the Napa Valley at Lake Berryessa, the Morning Glory Spillway known as “Glory Hole” is a funnel-shaped outlet that allows water to bypass the dam when it reaches capacity of 1.6 million acre-feet.



Before the development of the Solano Project, groundwater was widely used in Solano County for both urban and agricultural water supply. One of the main purposes of developing the Solano Project by the SCWA and Bureau of Reclamation (U.S.B.R.) was to rectify groundwater overdraft in some agricultural areas. After the Solano Project started making agricultural water deliveries, groundwater levels rebounded. In addition to approximately one-third of Vacaville's municipal water supply coming from groundwater, the cities of Rio Vista and Dixon solely use groundwater supplies from basins underlying the cities.

SCWA funds and performs all operations and maintenance on behalf of the U.S.B.R. SCWA has recently paid off the capital debt to U.S.B.R. and renewed the water supply contract in 1999. As part of the contract renewal requirement, SCWA is completing a Habitat Conservation Plan to protect endangered species in their service area. They are also part of the Lower Putah Creek Coordinating Committee that performs habitat improvements in Putah Creek.

"With the Solano Project being more than 40 years old, SCWA is spending an increasing amount of resources on its

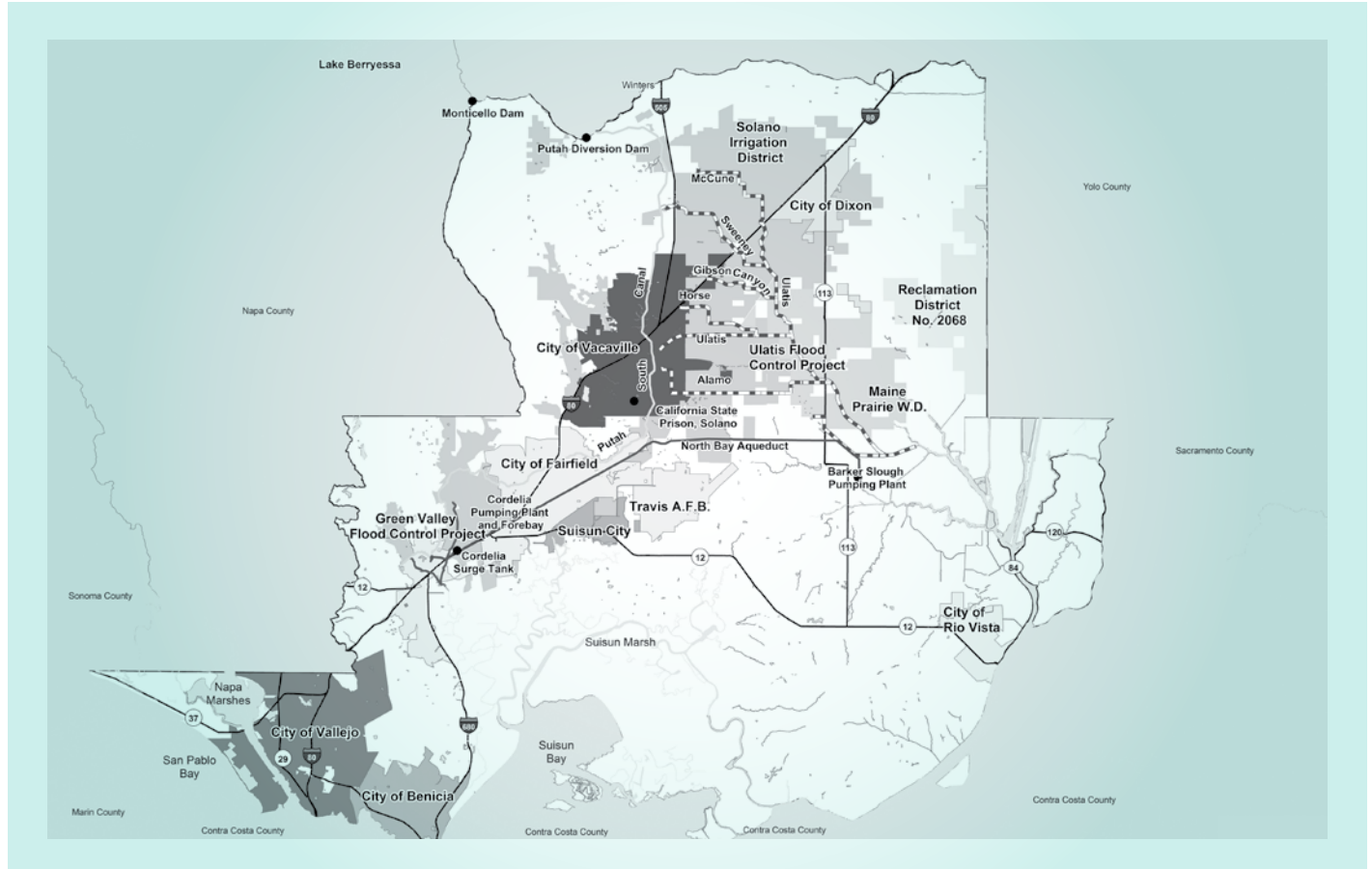
maintenance and rehabilitation," said Okita. "Due to the need for better water measurement and water management, SCWA and SID staff has been improving water measurement and water management procedures for the Solano Project."

## Flood Control

SCWA operates and maintains 63 miles of two flood control projects, which include Ulatis and Green Valley Flood Control Projects.

Completed in 1962 by the United States Army Corps of Engineers, the Green Valley Flood Control Project located in the Cordelia area extends six miles from the hills of Vallejo and Fairfield to the Suisun Marsh. This area was largely undeveloped when the project was first built.

The Green Valley Project was designed to handle a storm that occurs on an average of one in every 40 years. However, portions of the Green Valley Project within the City of Fairfield were upgraded to a 100-year protection level. Protecting agricultural land downstream of Vacaville is the primary purpose of the Ulatis Project. Since this is a non-urban area, the Ulatis Project was designed to handle a storm that occurs



on an average of one in every ten years. However, parts of the Ulatis Project within the City of Vacaville have been upgraded to a 100-year protection level.

With 57 miles of channels, the Ulatis Project covers a much larger area than the Green Valley Project. The Ulatis Project, located in the Vacaville -Elmira drainage basin, spreads from the hills to the northwest of Vacaville to the Liberty Island area in the Delta. Since the completion of the Ulatis Project in 1972, SCWA has handled its operations and maintenance and capital improvements. The Natural Resource Conservation Service, which constructed the \$14 million Ulatis project, inspects the project on an annual basis and reviews any plans for major modifications or improvements to the Project. The Corps of Engineers also performs yearly inspections and reviews any plans for major modifications or improvements to the Green Valley Project.

Since the channels of both projects are almost all on private property, easements are granted to SCWA for operations and maintenance access. Solano Irrigation District and Maine Prairie Water District use some of the Ulatis Project channels to convey agricultural irrigation water during irrigation season. As part of SCWA's maintenance of the two projects, trees and woody vegetation are cleared annually to ensure adequate flood control capacity. As both projects' watershed continues to develop, SCWA ensures there is adequate capacity for additional runoff.

### Water Conservation

An integral part of water management in Solano County, water conservation is promoted by SCWA through the retail water supply program of the cities and districts.

SCWA's Urban Water Conservation Committee focuses on countywide water conservation programs, such as water efficient toilet and washer rebate programs, turf retrofit programs, school education programs and commercial and

industrial audits. The water education exhibit and demonstration water conservation garden of the Six Flags Discovery Kingdom in Vallejo is an important part of the public education outreach program of the committee. There is also an agricultural conservation committee that works with growers to promote agricultural water use efficiency.

Cities and districts, such as Fairfield, Vacaville, Suisun City, Vallejo, Solano Irrigation District, Maine Prairie Water District and SCWA, receiving Solano Project water are required to meet water conservation standards of the federal government. These are the same conservation standards required of the Central Valley Project contractors and, for municipal users, are basically equivalent to the standards developed by the California Urban Water Conservation Council.

### Future Projects

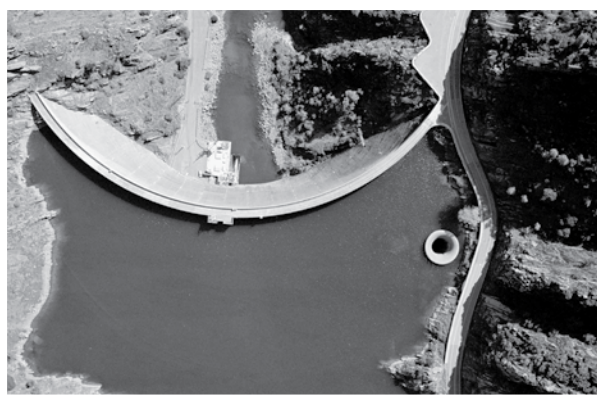
SCWA, in partnership with the Department and Napa County, is developing the environmental documents and permitting for an Alternate Intake for the North Bay Aqueduct.

"This \$450 million project will provide a second pumping plant for the North Bay Aqueduct on

the Sacramento River south of West Sacramento that will provide improved water quality and improved reliability," said Okita. "The current Barker Slough Pumping Plant is located in the Cache Slough area that is habitat for Delta and longfin smelt that has resulted in seasonal pumping restrictions. There are State plans for increased aquatic habitat in the Cache Slough area that have the potential for additional future pumping restrictions and drinking water quality degradation."

SCWA is also becoming increasingly involved in groundwater management and conjunctive use.

"We are researching and monitoring the local aquifer and have developed a pilot conjunctive use project with Reclamation District #2068," said Okita. ■



*(Top) Part of the Solano Project and located six miles below Monticello Dam, Putah Diversion Dam standing 29 feet tall creates Lake Solano and diverts water into Putah South Canal. (Bottom) Completed in 1957, Monticello Dam with Lake Berryessa located behind it is 304 feet tall and 1,023 feet long at crest.*



## Project Management Professionals at DWR

By Gretchen Goettl

Three staff members are packing new credentials these days as they walk the halls of DWR. After spending years to meet eligibility requirements and spending months of studying, **Matt Parker, Nader Noori, and Gretchen Goettl** have become Project Management Professionals (PMP). All three work for the Division of Statewide Integrated Water Management. Matt is a Senior Engineer in the Project Services Office, Nader is a Senior Engineer in the Feasibility Assessment Unit, and Gretchen is the Supervisor of Technical Publication in the Project Services Office.

Becoming a PMP is no small feat. It starts with a long online application to prove that a person meets the requirements to take the exam. The requirements can be met in one of two ways: (a) have a four-year degree, three years of project management experience, 4,500 hours leading and directing projects, and 35 hours of project management education, or (b) have a high school diploma, five years of project management experience, 7,500 hours leading and directing projects, and 35 hours of project management education. If the application is accepted, it's time to start studying for a four-hour exam.

"I scheduled the test very soon after the [DWR Project Management] training class and didn't realize that I had very little time to prepare," said Nader. "Believe me, I had to study very hard."

To maintain the credential, a PMP must earn 60 professional development units (PDUs) every three years. This continual training makes it possible to stay current on all aspects of project management and dedication to the furthering of project management.

Now that they have their PMP credentials, Nader, Matt and Gretchen join DTS's **Angel Romero**, in the IT Governance & Special Projects Unit, who has been a certified PMP for about 10 years, in looking forward to putting them to work for the benefit of the DWR staff.

"I am delighted that we are taking the steps to educate everyone on how important project management is to an organization's survival," says Angel.



Left to Right: Gretchen Goettl, Matt Parker, Angel Romero and Nader Noori.

"I have a communications background, so I tend to look at things from that angle. As a PMP, I hope I can help others to see the value in using project management principles to effectively communicate the purpose, intent and result of a project," said Gretchen Goettl, who completed her PhD in Project Management in December 2011 and hopes to teach project management classes within DWR.

In recent years, DWR has started to embrace the importance and value of project management. Gone are the days of project managers relying on gaining knowledge during conversations over coffee.

"Knowing what I know now, I can't imagine truly effective and efficient project management without a Project Management Body of Knowledge-type framework. It's a bit of a corporate culture shift for the department, but the short-term investment will undoubtedly yield significant long-term dividends," says Matt Parker.

There is still a long way to go in the effort to change the culture of project management at DWR. But, as Nader says, "Project management application is the right way to successfully complete your project, big or small."

And, according to Angel, "Project management adds huge business value to an organization in improving financial performance, project/process execution, and customer satisfaction."

If you're a PMP and we overlooked you, please contact Matt Parker at [mattp@water.ca.gov](mailto:mattp@water.ca.gov). For more information about PMP, visit <http://www.pmi.org/> ■

## Extreme Engineering Exhibit at California Museum

The “Extreme Engineering: The California State Water Project Past, Present and Future” exhibit is showing at the California Museum in downtown Sacramento.

On exhibit from September 13, 2010 to July 17, 2011 in honor of the SWP’s 50th anniversary, this hands-on, interactive exhibit explores the many benefits of the State Water Project, from providing water supply to flood control, recreation and environmental protection. The newly produced HD “Wings Over Water” is projected on the big-screen, flying from the nation’s tallest dam to its longest aqueduct, while artifacts and interviews reveal how the SWP changed the way we live in the Golden State.



DWR employees receive free admission by showing their DWR badge to view this informational exhibit on the second Monday of every month between the hours of 11a.m. and 2p.m. The California Museum is located at 1020 O Street, Sacramento, CA 95814. ■



## Frenchman Dam and Lake Celebrate 50th Anniversary

*As the first State Water Project dam and lake completed, the Frenchman Dam and Lake located in Northern California celebrates its 50th anniversary this year. After two years of construction, Frenchman Dam, the tallest of the three Upper Feather River dams, was completed in 1961.*

## Save Our Water Exhibit



DWR employees from the South Central Region and Public Affairs Offices promoted the “Save Our Water” exhibit at the 2010 Big Fresno Fair from October 6 to 17. During the “Save Our Water” Day on October 14, Fresno fair participants pledged to save 925,990 gallons a month. In 2010, the “Save Our Water” exhibit was also at the California State Fair, Marin County Fair, Yolo County Fair, and Lodi Grape Festival.



## Making a Difference

From response and recovery efforts for the Calxico earthquake to the Jones Tract levee break, DWR's Emergency Preparedness and Security Manager **Sonny Fong** not only fulfilled his childhood dream, but also kept his promise to make a difference in the lives of others.

"The reward of my job is when I go home that I know I've done the best that I can and I have made a difference," said Sonny of his 34 years of DWR service.

Sonny's interest in the field of security began while growing up in Illinois. As a child, he always admired his uncle, who was chief of security for Caterpillar.

"I always wanted to be a cop, but in Chinese families law enforcement and all that stuff was verboten because there was a distrust of law enforcement."

In 1970, Sonny and his family moved to Sacramento. Three years later, Sonny began his DWR career as a student aid while attending Sacramento High School.

Sonny became one of the first DWR Engineering Student Assistants in 1974. He traveled throughout California to work on several State Water Project (SWP) projects, such as Miners Ranch tunnel in Oroville and Los Banos Desalting Plant in the Central Valley. During his more than 20 years of field inspection and project supervision, he worked on repairs for the California Aqueduct, levees, earthquakes, fires, and other disasters. He is very appreciative of the opportunity to have mentored under and worked with (and for) highly knowledgeable, dedicated and respected DWR staff throughout his career.

Sonny's career path took a twist into the security field soon after he became Emergency Preparedness Manager in 1997. Although responding to California disasters was nothing new to Sonny, his new role gave him chance to lead in response and recovery efforts.

"Because the Flood Emergency Action Team Report of 1997 stated DWR was not adequately prepared nor did it have an organized emergency operation structure, the executive position was created to help prepare and respond to floods and any other disasters," said Sonny.

His position came to include managing DWR's Standardized Emergency Management System (SEMS) implementation, performing emergency exercises and developing field responses, and working with the California Emergency Management Agency on emergency preparedness, response, and recovery. Sonny developed six of the ten published Flood Emergency Action Team guidelines. He also managed the development of DWR's Emergency Response Plan and the Business Resumption Plan, which became the first such plans in California's state government.

Sonny was the program manager for developing a Y2K plan,



*On October 20, Sonny Fong (2nd to right) briefs Adjutant General Mary Kight (center) of the California National Guard on flood threats to Sacramento, the Central Valley, and Northern California.*

which was used by the Department of Information Technology. Due to an increase in Resources Building thefts, Sonny also formed the Resources Building Security Subcommittee. In the aftermath of September 11, 2001, he co-developed procedures and policies for security coordination for department facilities, including those of the SWP.

Sonny represents DWR to the Governor's Emergency Operations Executive Council and the Public Safety Radio Strategic Planning Committee. He is also in his fifth elected term as a board member of the California Utilities Emergency Association.

Sonny has received numerous awards for his DWR service. He was recently honored for his role in the emergency repair of 34 critically-eroded portions of the Sacramento River Levee System before the 2006-2007 flood season.

"My motto is 'just do it,'" said Sonny. "I've always maintained my integrity. If you give me something, I'm going to get it done and I'm going to do it right the first time."

Sonny assisted in recovery efforts after disasters including the Loma Prieta earthquake, 1997 and 1998 floods, Southern California mudslides, Jones Tract levee break, and the Southern California fires of 2003, 2007, and 2008.

"I learned a lot from the Loma Prieta efforts. I met a lot of good people that came from all over the United States. The best part of my job is meeting all these people that are equally or more dedicated than I am," said Sonny.

Sonny led a joint state and federal team that performed damage and loss assessments of many damaged facilities including the University of California Berkeley's Moss Landing facility during the Loma Prieta earthquake. Working on recovery efforts, such as this, has allowed Sonny to help others.

"Those are things that I smile about when I look back because I know I made an impact and did something that prevented someone from getting hurt, or got them back on their feet as fast as possible" said Sonny. ■



## DWR Management Development Program Graduates of 2010

By Sean Walsh

DWR's Management Development Program is a year-long internal training program. Mid-level managers are nominated by their direct supervisors to participate. The Program teaches participants more about DWR and helps them develop the tools to become more effective leaders. Over the course of the Program, participants are teamed together to develop and complete a project which could be implemented by the Department. Each team gives a presentation on their project on the final day of the Program.

On October 13, 2010, the 2010 DWR Management Development Program came to a close with the five project teams giving their presentations to an audience that included the Chief Deputy Director, Sue Sims, two Deputy Directors; Jim Libonati and Ralph Torres, one Acting Deputy Director, John Pacheco, five Division Chiefs; Kamyar Guivetchi, Kim Oliphint, Perla Netto-Brown, Tim Garza, and Dean Messer, San Luis Field Division Chief Jim Thomas, Oroville Field Division Operations Branch Chief, Maury Miller, DES Office

of Environmental Compliance Chief, Heidi Rooks, Security Operations Chief, Sonny Fong, Assistant to Deputy Director Dale Hoffman-Floerke, BG Heiland, and DOE Geodetic Branch Chief, Scott Martin. Scott Martin also served as the Program Mentor this year.

After the presentations were complete, the Deputies and Chiefs shared their thoughts and support of the participants, their projects, and the Program in general.

Since the Program began in 1995, over 400 DWR mid-managers have completed the Program. This year, 27 graduates were added to that distinguished list. ■

*Left to Right: (Front) Charles Mee, Y-Nhi Enzler, Ram Verma, Joanna Gonzales, Stephani Spaar, Bijaya Shrestha, Gina Rouse, Tina Schaffer, Sue Sims. (Back): Michael Sabbaghian, Michael Hom, Zaffar Eusuff, Todd Hillaire, Cassandra Enos-Nobriga, Scott Martin, Kamyar Guivetchi, John Pacheco, Jim Pearson, Jennifer Metcalf, BG Heiland, John Wilson, Maury Miller, Tim Ross, Lew Moeller, Marianne Kirkland, Bill Croyle, Twylla Winslow, Mike Cardoza, Nader Noori, Ruppert Grauberger, Bonnie Duecker, Sonny Fong, Ralph Torres, Jim Libonati, Eric Hong. (Not in photo: Omar Moheyeldi)*

### Professional Engineer Exam Graduates



**Maninder (Manny) Bahia**  
Environmental Services  
Engineer  
July 2010



**MD M. Haque**  
Flood Management  
Engineer  
July 2010

### Professional Geologist Exam Graduate



**Jack Tung**  
Southern Region Office  
Engineering Geologist



## Apprentice Graduates for 2010

*Created in 1972, DWR's Operations and Maintenance Apprentice Program provides training for Utility Craftworkers, Operators, Mechanics, and Electricians. To graduate from the program, each apprentice completes on-the-job training, classroom training, home study, and a final exam.*



**Daniel Boulant**  
Oroville Field Division  
Hydroelectric Plant Operator



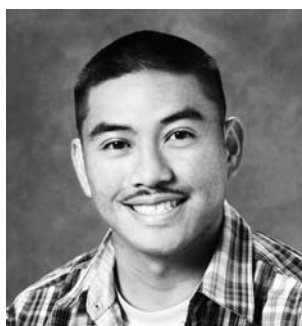
**Alex Bumgarner**  
Sutter Maintenance Yard  
Utility Craftworker



**Eric Burk**  
Oroville Field Division  
Hydroelectric Plant Operator



**Andre Clay**  
San Joaquin Field Division  
Hydroelectric Plant Operator



**Dillon De los Reyes**  
Delta Field Division  
Hydroelectric Plant Operator



**Hunter Doyle**  
Oroville Field Division  
Hydroelectric Plant Operator



**Jeff Harrison**  
Southern Field Division  
Utility Craftworker



**Vahnita Hooker**  
San Joaquin Field Division  
Hydroelectric Plant Mechanic



**Cory Hutton**  
Sutter Maintenance Yard  
Utility Craftworker



**Lori Grimes**  
Southern Field Division  
Hydroelectric Plant Operator

## Apprentice Graduates for 2010 *continued*



**Stephanie Jamison**  
San Joaquin Field Division  
Hydroelectric Plant Operator



**Bryan Johnson**  
San Luis Field Division  
Hydroelectric Plant Operator



**John Craig Lee**  
Delta Field Division  
Hydroelectric Plant Operator



**Seth Marsh**  
Delta Field Division  
Hydroelectric Plant Electrician



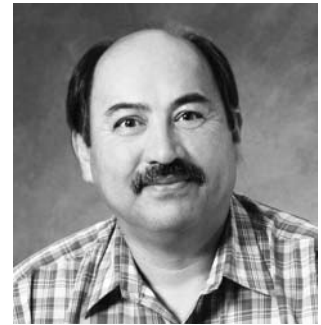
**Jacob Morse**  
San Luis Field Division  
Hydroelectric Plant Operator



**Louis Normandin**  
San Joaquin Field Division  
Hydroelectric Plant Mechanic



**Juan Ocegueda**  
San Joaquin Field Division  
Hydroelectric Plant Mechanic



**Rene Perez**  
Southern Field Division  
Hydroelectric Plant Operator



**Justin Sannar**  
Sacramento Maintenance Yard  
Utility Craftworker



**Ryan Sherman**  
Southern Field Division  
Utility Craftworker



**Kevin Smith**  
Southern Field Division  
Hydroelectric Plant Operator



**William Smith**  
San Joaquin Field Division  
Hydroelectric Plant Operator



## Twenty-Five Years of Service



**Manucher Alemi**  
Statewide Integrated Water Management  
Water Use and Efficiency Branch Chief  
January 2011



**Marla Burnett**  
FloodSAFE Environmental Stewardship  
and Statewide Resources Office  
Associate Governmental Program Analyst  
January 2011



**Deborah Condon**  
Flood Management  
Environmental Program Manager I  
November 2010



**Teresa Engstrom**  
Engineering  
Principal Engineer  
November 2010



**Angela Gavia**  
Fiscal Services  
Accounting Officer Specialist  
January 2011



**Lorie Hall**  
Management Services  
Staff Services Manager I  
November 2010



**Scott Hurd**  
Operations and Maintenance  
Oroville Field Division  
Electrical-Mechanical Test. Tech. III  
January 2011



**Lawanda Jaramillo**  
Northern Region Office  
Administrative Officer II  
November 2010

## Birth Announcements

### *Congratulations to DWR Parents:*

**Ming-Yen Tu**, an Engineer with the Bay-Delta Office, has a son named Alex, who was born on September 13, 2010 weighing 5 pounds, 5 ounces and measuring 17.5 inches long.

**Lan Liang**, an Engineer with the Bay-Delta Office, has a daughter named Linda Zhang, who was born on September 9, 2010 weighing 8 pounds, 1 ounce and measuring 20 inches long.

**Marcus Yee**, a Senior Environmental Scientist with Environmental Services, has a daughter named Olive Chantra Emily, who was born on October 6, 2010 weighing in at 7.5 pounds and measuring 20.5 inches.



**Don Rasmussen**  
Flood Management  
Supervising Engineer  
November 2010

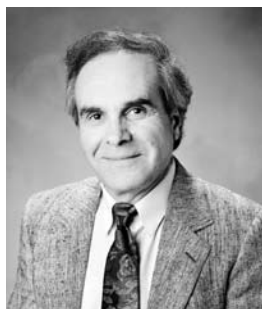


**Heidi Rooks**  
Environmental Services  
Environmental Program Manager II  
January 2011

**Valerie Andrews**  
Executive – Internal Audit Office  
Associate Management Auditor  
November 2010 *(Not Pictured)*

## Retirements

### Samuel Brandon



"I learned a lot and met some of the kindest people at DWR," said **Samuel Brandon** of his more than 32 years with DWR. "God bless my friend and teacher Don Jackson."

A graduate of Sacramento State with Bachelor of Science and Master of Science degrees in Civil Engineering, Sam worked most of

his DWR career for the Division of Flood Management (DFM). During his two years with Safety of Dams in the 1980s, he prepared the National Dam Inspection reports for Box Canyon, Marsh Creek, Sunset South Basin dams and helped with other dam reports.

"At DFM, I helped with adoption of Reclamation Board's Designated Floodways for the Sacramento River, St. John's River, and Cross Creek," said Sam.

Sam also reviewed the encroachment applications for the Central Valley Flood Protection Board (CVFPB) (formerly, The Reclamation Board) and wrote the conditions for permits. Sam helped the project proponents, engineers and attorneys for new developments and assisted DWR's legal staff on the

disputed projects and helped with preparation of "California Code of Regulations; Title 23."

As a member of the Environmental Review Committee for the CVFPB, Sam met with county, city, and local agency representatives for various projects. Sam also remembers working on the adoption of Sacramento River Designated Floodway and attending public meetings with not very happy farmers and local residents.

"For my last two years at DWR, I worked on the 'Flood Risk Notification Program' in preparing the brochure to be mailed to the public living next to the levees," said Sam.

In addition to working as a retired annuitant water resources engineering associate for the Floodway Protection Section for the CVFPB, Sam's retirement plans include anything but long, ocean cruises. Sam will continue volunteering at the local SPCA's animal shelters.

"Sam Brandon has provided an exemplary service to the Board for a very long time," Jay Punia, Executive Officer for the CVFPB. "He served applicants seeking Board permits with passion and commitment. I am grateful that he is still working with us as retired annuitant and sharing his experience with our new staff members." ■

### Michael Petersen



When **Michael Petersen** began his State career 32 years ago, Jerry Brown was California's Governor. After working through five Governors and the reelection of Brown, Michael marks the end of his career in dam safety and flood management in California.

After six months with the Franchise Tax Board processing taxes and his graduation in Business Administration from Sacramento State University, Michael joined DWR's Division of Planning as a junior engineering technician. He reviewed environmental impact reports for hydroelectric projects. In the 1980s, he worked for Design and Construction reviewing plans and specifications for state dams,

such as Pine Flat Dam. As a water resources engineering associate for the Sacramento Riverbank Protection Program in 1986, he traveled throughout the Delta from Collinsville to Chico Landing to survey levee repairs.

"We evaluated what sites needed to be repaired due to erosion," said Michael. "It was nice to be able to see these projects from start to completion."

In 2003, Michael joined the Central Valley Flood Protection Board. As part of the Floodway Protection Section in the Floodway Encroachment and Enforcement Branch, he helped review and evaluate more than 1000 applications for permits along rivers, streams, bypasses, and designated floodways.

His retirement plans include more time for traveling and home projects. ■



## Retirements

### Greg Rowsey



"Water Resources has given me some great opportunities that I would have never have had anywhere else," said Greg Rowsey of his 30 years of DWR service.

After several years in the private sector, Greg began his career at DWR with Delta Field Division as a Hydroelectric Plant Electrician I in

1980. His assignments at Delta included working at several facilities of the State Water Project, including Banks Pumping Plant (Delta back then), South Bay Pumping Plant, and along the California Aqueduct.

After two years of field division experience, Greg joined Design and Construction's Sacramento Project Headquarters as an Inspector in 1982. In his new assignment, Greg had the opportunity to travel to many locations in the U.S. and abroad.

He performed construction contract administration and inspection of equipment and materials being furnished for new construction, expansion, and refurbishment of several SWP facilities. From 1983 to 1985, Greg was assigned to Yokohama, Japan as resident inspector of SWP equipment being manufactured in several factories throughout that country.

"My job took me all over the United States," said Greg. "I've also been to Canada, Switzerland, Germany, Belgium, France, Sweden, Norway, and Mexico. While the travel may sound romantic to some, it was sometimes challenging. For instance, in many European countries many stores, restaurants and attractions close on Sundays. So you're stuck eating at the hotel with not a lot to do but walk. I wore out many pairs of shoes checking out cathedrals and castles on some very long Sundays."

After completing this chapter with the Construction Office as an Electrical Construction Supervisor I and later II, Greg became Construction Management Supervisor with the Division of Design and Construction from 1992 to 1997. Although Greg had enjoyed the opportunity to travel and gather collectibles from so many places, he says he was happy to end the travel and spend more time with his family.

During Division of Design and Construction restructuring and staffing reductions in 1997, Greg's career took a unique twist when he was hired into the DWR's Personnel Office as a Staff Services Manager I in Payroll and Benefits. He later served as DWR's Chief of Personnel from 1999 through 2007.

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*"Water Resources has given me some great opportunities that I would have never had anywhere else."*

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"Not too many construction folks get the opportunity to go into HR and do the things I did in there for 10 years," said Greg.

"Personnel had always been a black box to me, like I think it seems to most people. You think only bad things come out of Personnel," said Greg. "However, I realized the people working in Human Resources and Personnel are some of the most service oriented, hardest working, and most knowledgeable in state service. What always amazed me most about them is that I came in as this construction guy to all of a sudden supervise and lead them. You'd think they'd give me the old run around, but they were very willing to tell me what they knew and teach me the ropes. I was amazed how open and willing they were to share."

Greg's final post with DWR was as Chief of the Planning and Scheduling Section in the Division of Engineering's Construction Office in 2007. He's pleased to have been able to work with his staff and several attorneys to help successfully resolve a couple of major construction contract disputes during his last few years.

Of unfinished work he's been involved with, Greg says "I'm confident that staff will go on to successfully complete the development of new construction procedures, and the implementation of a new system and processes to help DOE manage its projects better."

With the end of his DWR career in December, Greg plans include more time with his family, volunteer activities, and working as an electrical contractor.

"I've done enough traveling, but there are a few places that I've visited that I plan to take my wife and daughter to visit," said Greg. "My son just graduated from college, so he is on his own doing well. I'm going to have a lot of fun being able to spend more time with my daughter, who is currently in middle school and active in sports." ■

## Retirements

### Jeannie Love



After a tip from a friend in 1984, **Jeannie Love** wandered into a DWR field office to apply for a janitorial job and was told they were no longer hiring for that position. However, they were interested in hiring Maintenance and Service Occupational Trainees at San Luis Field Division. Jeannie was hired

following an interview and the rest is history.

"I was fortunate to be hired back then," said Jeannie.

"Today, I look back with a lot of pride and appreciation for the opportunity."

Luck must have been on her side since women were not a common sight in civil maintenance. Jeannie went on to climb the ladder as a Service Assistant for Civil Maintenance, Civil Maintenance Apprentice, then graduated in 1988 from the apprentice program before making her way to journeyworker.

"It was tough at the beginning being the only female," said Jeannie. "During the apprentice program, I had to really show them that I wanted to learn," said Jeannie.

The apprentice program gave her the experience she needed to excel, learning about different maintenance aspects of the aqueduct.

In 1996, she was promoted to Civil Maintenance Supervisor at the Coalinga Operations and Maintenance (O&M) Center. She became Assistant Utility Craftworker Superintendent for the Coalinga O&M Center in 2000 and Utility Craftworker Superintendent for San Luis Field Division in 2002.

"I had a lot of great teachers who showed me how the job should actually be done and how to be a leader by being dedicated to the work, treating people with respect and honesty and in turn, receiving respect from those around you," said Jeannie.

As Superintendent she oversaw budgets, mobile equipment and made sure jobs were completed on time.

"After 26 years with DWR, I hope I set a good example for the women who follow behind me," said Jeannie.

Jeannie and husband John, who also retired from DWR's San Luis Field Division, plan to camp and fish their way around the U.S. while dropping in to visit with their four grandkids along the way. ■

### Eydie Duggan



During **Eydie Duggan's** five years as Office Technician for State Integrated Water Management, her greatest reward was helping office staff keep their projects on schedule.

In addition to being timekeeper for the Statewide Infrastructure Investigations Branch, Eydie ordered office equipment, provided

staff support on projects, organized meetings, and managed Cal Card purchases.

Before joining DWR, Eydie worked as a word processing technician for Health Services and California Environmental Protection Agency. She also worked a year as Office Assistant II for the Department of Transportation. For the Department of Developmental Services, she was responsible for the Medicare claims of 532 clients admitted to three developmental and mental facilities.

"I loved DWR the most," said Eydie. "The people and things that they were doing made it a wonderful office to work for. I worked with a very dedicated and intelligent group of people."

For the last 18 years, she was also vanpool coordinator for her daily commute to and from Placerville. A native of Idaho, Eydie graduated from Minidoka County High School and attended Idaho State University in Pocatello, Cosumnes River, and Sacramento City colleges.

In addition to spending more time with her husband and retired DWR employee Michael Duggan, her retirement plans include traveling in their travel trailer and remodeling their home.

"Losing Eydie was like losing family. She took care of us all. She is very organized and tended to all the loose ends we created," said Supervising Engineer Stephen Cimperman of DWR. "She went well beyond the call of duty in everything she did. Our office records, files, equipment, furniture, you name it, was all present and accounted for. All correspondence and administrative paperwork was meticulously completed ahead of time. She is irreplaceable." ■



## Retirements

### Jerry Johns



Being part of the team finding solutions to California's water dilemmas has been the greatest reward in Deputy Director **Jerry Johns'** 38 years of State service.

Developing new approaches to problem solving has been key to Jerry in several projects here at DWR, such as the Bay-Delta

Conservation Plan (BDCP), Environmental Water Account, the Yuba River Accord, Non-Physical Barrier efforts, and many others.

"What I've seen over the years is efforts, like BDCP, local river issues and most water issues we deal with are complicated. To really solve them, you need to get the parties that are directly involved to work those things out," said Jerry. "If you have to elevate issues to the Water Board or a court, you've probably failed in your desire to resolve the issue. It's hard for the Water Board and the courts to pick up an issue as complicated as most California water issues and know all the ins and outs of specific projects in a very short period of time. Parties need to work through those issues."

Born and raised in Santa Cruz, Jerry always had an interest in biology and ecology. A graduate in Zoology, he earned his master's in Freshwater Ecology from the University of California, Davis (UCD).

Jerry's State career began as a Student Assistant for the State Water Resources Control Board (SWRCB) in 1972. He started in the Monitoring and Surveillance Program. By 1974, Jerry became an environmental specialist. He assisted in modifying Delta water quality standards resulting from the 1976-77 drought.

Jerry helped develop the first coordinated water quality and water rights hearing for Delta standards, which became Water Rights Decision 1485. This 1978 decision set the standards for operations of the State Water Project (SWP) and federal Central Valley Project (CVP) in the Delta.

As Chief of the Water Board's Bay-Delta Unit, Jerry helped coordinate discharge monitoring programs in the San Francisco Bay and determined studies needed for San Luis drainage permits and San Joaquin Drainage issues.

"From Lake Cachuma to Mono Lake decisions to North Coast river issues, I oversaw all of the environmental work

for water rights permits being issued," said Jerry. "There has always been conflict between water development and protection of the environment. At the Water Board, we kind of sat in as the judge on those issues. It was very rewarding to work on those very complex problems. In those cases which people couldn't solve themselves, the Board had to take information in the hearing process and come to a decision to resolve the issue."

After becoming the Assistant Chief of the Division of Water Rights as an Environmental Program Manager II and the author of the Guide to Water Transfers at the SWRCB, Jerry joined DWR in June of 2001 as Chief of the Water Transfers Office. As chief of this newly-created DWR office, he developed and managed the Environmental Water Account and DWR water transfers for 2 million acre-feet of water during the seven-year program.

"It was very rewarding to me because I was new to the Department. We had a multi-disciplinary team from various divisions," said Jerry. "The Department does best in bringing together different talents from different disciplines to solve problems. I've seen that happen here at DWR time and time again. There is a culture within the Department which is very healthy in terms of problem solving. The expertise that people bring to problem solving is remarkable."

As Acting Deputy Director during the Jones Tract levee failure, Jerry witnessed DWR's expertise in handling emergency situations. In 2004, Jerry was appointed Deputy Director. After DWR's reorganization and the creation of the BDCP in 2006, Jerry became Deputy Director over the Division of Environmental Services, Bay-Delta Office, and FloodSAFE Environmental Stewardship and Statewide Resources Office.

With the release of the Highlights of the BDCP on December 15, 2010, Jerry formally retired on December 30. However, he has returned to DWR as a retired annuitant to help analyze biological effects of the plan.

As for retirement plans, Jerry will be hitting the ski slopes, spending more time with his wife of 39 years and two adult sons, and working on his 1928 Chevy truck that has been sitting in his garage for several years.

"This Deputy job here at DWR has not been the most conducive to getting extra things done outside of the office," said Jerry. "I have a raft of things that I need to get done and now maybe I will have the time to do them." ■

## Retirements

### Debra Sprinkel



"I have had many memorable and satisfying assignments during my long State career with the 10 different Departments that I worked for throughout the State of California," said **Debra Sprinkel**, who retired in December after 31 years with the State. "One of my most memorable assignments was

working for the Department of Water Resources within the Labor Relations Office here in Sacramento. I have truly enjoyed the professionalism of this organization and the wonderful people that are employed here as this made my job a lot easier."

Debra's other favorite assignments included her term with the California Highway Patrol while working in Los Angeles as an officer.

"This assignment was definitely an 'eye opener' and helped to shape me in many positive ways while literally preparing me very quickly for adulthood and beyond," said Debra. "Another memorable assignment was working for the Department of Transportation in Fresno for 15 years, which gave me the opportunity to work in numerous assignments during my tenure, especially within human resources (including labor relations, the civil rights arena, training, recruitment, and health and safety) which actually prepared me for my reign in labor relations as my favorite position."

Her assignments, which variously placed her in the Fresno, Sacramento, and Los Angeles areas, began with the California Highway Patrol (CHP) as an Officer in South Los Angeles and a CHP Dispatcher in North Hollywood, CA. She also worked for the departments of Real Estate, Motor Vehicles, Consumer Affairs, Food and Agriculture, the Board of Equalization, and the State Water Resources Control Board. After working for the Department of Transportation, Debra joined the Department of Corrections and Rehabilitation's Central California Women's Facility in 2006 and DWR in 2007 as a labor relations specialist.

As a labor relations specialist, Debra's assignment included negotiating contracts for the State of California, enforcing labor contracts and resolving grievances while working with management and the various unions, assisting management and supervisors with labor relations questions and issues, and conducting "Labor Relations" Training classes.

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*"I have truly enjoyed the professionalism of this organization and the wonderful people that are employed here as this made my job a lot easier."*

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"In the course of my job assignment and as part of the Labor Relations Team, it was imperative that I work well with people," Debra said. "Because if you possess good people skills and a conflict arises or a grievance is filed, it is more likely that these issues will be resolved before they reach critical mass or become very costly to the State. In order to assist in preventing the challenge of a conflict, I always recommend to supervisors that their most important job is to ensure that the employees they supervise are provided the tools they need to do their job and that they also ensure that their employees are abiding by the appropriate MOU with regard to wages, hours and terms and conditions of employment."

A graduate of the California Highway Patrol Academy in 1980, Debra earned her Administration of Justice degree from Sacramento City College in 1983.

Debra, who owns a 40-acre ranch just south of Yosemite, plans to return to it permanently and get caught up with her chores.

"I also have a long list of things to do on my 'bucket list' including growing grapes on my property," said Debra. "My husband and I also plan to do some more traveling, cruising and scuba diving throughout Europe, the Caribbean, Mexico and beyond. I also look forward to many trips throughout the United States as there are still so many places that I have not yet visited within our very own country. And yes, I just might decide to work part-time or fulltime if a job arises that interests me or if I need a little extra spending money. With my Type A personality, I'm sure that I will also find time in my busy schedule to volunteer for an organization that needs or wants my expertise such as helping children or animals in need. I definitely have options now and will take advantage of them and enjoy life to its fullest." ■



## Retirements

### Elmer Gray



From Heavy Equipment Mechanic to Hydroelectric Plant Maintenance Superintendent for San Joaquin Field Division, **Elmer Gray** has great memories of his 31 years with DWR.

"I have enjoyed the past 31 years working for the Department," said Elmer. "It has been very challenging at times, but also very rewarding as

well. I have had the opportunity to work with staff in various departments that were very talented and had a high level of expertise in many areas."

Elmer began his DWR career with Mobile Equipment in 1979 as a Heavy Equipment Mechanic. In 1983, he became a Hydroelectric Plant Mechanic assigned to Edmonston Pumping Plant. He was promoted to a mechanical leadperson in 1988 and was relocated to the Wheeler Ridge Pumping Plant, where he led the mechanical staff for eleven years.

In 1999, Elmer returned to Edmonston as mechanical leadperson. A year later, he was promoted to a Hydroelectric Plant Supervisor and supervised both mechanical and electrical activity. In 2007, he was assigned to a one year temporary position as Hydroelectric Plant Maintenance (PM) Superintendent for the San Joaquin Field Division.

"I created the original Edmonston 'History Book,' which was used to evaluate equipment condition and simply a tool to help plan maintenance activity for the Plant," said Elmer. "This book was used during the development of the Conditional Assessment Program (CAP), which is utilized by all five Field Divisions today. CAP inspections help to identify problem areas associated with plant equipment, so repairs can be planned,

scheduled, and repaired before a failure of equipment occurs."

He was promoted to PM Superintendent in 2008. As Superintendent, he was responsible for all plant maintenance activity in San Joaquin Field Division (SJFD), which includes seventy-four main rotating units located in SJFD's pumping plants.

"I would like to express my thanks to all my friends, staff, and co-workers that I have worked with over the years," said Elmer. "The help and support I received from all made my job a little easier to perform."

Elmer along with David Roose, Chief of the State Water Project Operations Control Office, were featured in an approximately 15 minute segment of Modern Marvels (History Channel) that was titled "Horsepower". This segment was focused on different applications of horsepower, which included the Edmonston Pumping Plant relating to the 80,000 horsepower motors.

"During my career with the Department, I also had the opportunity to travel to different locations for equipment inspection purposes," said Elmer. "One of the inspection trips involved traveling to Japan in August of 2006 to visit the Hitachi Manufacturing Plant in Tsuchiura to see the first of four replacement four stage pumps for the Edmonston Plant. Besides the business aspect of the trip, I also had a chance to see a little of the Japanese culture while staying in both Tsuchiura and Tokyo. The trip to Japan was very enjoyable and one of the highlights of my career."

"My wife and I plan to travel and enjoy time with the family, grandkids, and simply enjoy life to its full extent," said Elmer of his retirement, which began in November. "I also have many home projects to complete that I have deferred over the years." ■

## Retirements *continued*

### Alvin Adair

Southern Field Division  
Utility Craftsworker

### Richard Allen

Environmental Services  
Water Resources Technician II

### Della Bettencourt

San Luis Field Division  
Water Resources Technician II

### Patricia Cannedy

Management Services  
Assoc. Business Management  
Analyst

### Nirmal Cheema

Delta Field Division  
Associate HEP\*\* Utility Engineer

### Agnes Forshey

Technology Services  
Systems Software Specialist II

### James Forshey

Technology Services  
Sr. Info. Systems Analyst (Supv)

### Tana Leigh Gabriel

Public Affairs Office  
Graphic Designer III

### Debbie Greco

Delta Field Division  
Office Technician (Typing)

### Robert Henson

San Joaquin Field Division  
Control System Technician II

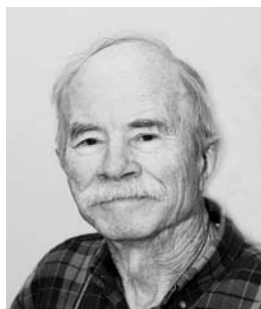
### Mark Hillis

Central District  
Water Resources Technician II

\*\* Hydroelectric Power

## Retirements

### Eugene Pixley



December 30, 2010 will be etched in Northern Region Office's Land and Water Use Scientist **Eugene Pixley's** mind for years to come. This significant date marks the end of his dedicated DWR journey which spans more than five impressive decades and at the same time, sparks the beginning

of an exciting new phase in his life, retirement. According to Gene, "It's a matter of perspective because as you get older time does fly by faster, so it doesn't seem like I started 52 years ago."

Gene joined DWR in 1958 as a junior land and water use analyst in Sacramento for two years and at the San Joaquin District before the State Water Project existed. This was back when work had just begun to relocate the Western Pacific Railroad and Highway 70 around the proposed site of Lake Oroville.

In 1971, Gene transferred to Southern District and lived in the Los Angeles area for six years. He moved to Red Bluff in 1977, where he's lived ever since.

"I feel lucky to have found a transfer to Red Bluff," said Gene. "It's a beautiful place to live, in between the two mountain ranges."

Throughout his remarkable DWR career, he has witnessed tremendous change in water storage, water transfers and water conservation.

"The work was simple when I first started, but has progressively become more complex with ground water management being the most important of changes," said Gene.

A favorite project during Gene's last years with DWR

involved water audits and leak detection in water systems. He enthusiastically taught classes on how to use complicated equipment, which included microphones to pick up the sound of leaks.

Born in Washington State, Gene moved in 1939 to San Diego with his family when he was seven. His father worked in the aircraft industry during the war years, then they moved to Colorado Springs to farm. However, the short growing season quickly brought the family back to California. This time, they headed to Porterville in Tulare County where they set up a dairy farm and already had prominent California roots. The nearby town of Pixley is named after his great-great Uncle, Frank Morrison Pixley, who served as California Attorney General for Governor Leland Stanford from 1862 to 1863.

Since Gene's interest in natural resources was apparent as a kid growing up on his family dairy farm, it was no surprise when he eventually graduated from the University of California, Berkeley, with a degree in Soil Science in the early 1950s. He later served about a year and a half with the U.S. Army in Panama, where he practiced his Spanish.

Gene's son, two daughters, grandkids, and a great grandchild are spread out between Minnesota, Albuquerque and Bakersfield now, but this retiree has plenty of hobbies to keep boredom at bay. He'll now have more time to tinker with his vintage 1955 Nash Metropolitan and to take center stage playing bass clarinet in the Red Bluff Community Band during performances for Monday Night in the Park and Salvation Army, and other venues. He is also a qualified expert target shooter.

Gene and his wife, Brenda, plan on nurturing their travel bug. First on the agenda, a trip to check out Oakridge, Oregon.

"We heard the small community of Oakridge is a great place to retire," said Gene. ■

## Retirements *continued*

**Richard Honma**  
Safety of Dams  
Engineer

**Brenda Journagan**  
Management Services  
Staff Services Analyst

**Marilyn Kehlet**  
Operations & Maintenance  
Systems Software Specialist III  
(Supv.)

**Lenny McKnight**  
Delta Field Division  
Utility Craftworker Supv.

**Gloria Pearson**  
Flood Management  
Secretary

**Muhammad Rashid**  
Engineering  
Supervising Engineer

**Jesus Salazar**  
Southern Field Division  
Chief HEP\* Operator

**Fraser Sime**  
Northern District  
Senior Environmental Scientist

**Richard Soehren**  
Executive  
C.E.A.

**Silvia Sparks**  
Southern Field Division  
Business Service Officer I

**Artemio Tapia**  
Engineering  
Construction Supervisor II

**Harold Timmerman**  
Flood Management  
Maintenance Mechanic

\* Hydroelectric Plant



## Retirements

### Patricia Freiler

After handing out more than half a million DWR employee payroll and travel expense checks in 10 years, **Patricia Freiler** was not only a face that many employees always looked forward to seeing, but a friend to many.

"I enjoyed my assignment in payroll the most because I made a lot of friends and met a lot of people," said Patricia. She retired in November after 34 years of State service.

From 1988 to 1998, Patricia was an Accountant I in the DWR Payroll Unit. She sorted and distributed all checks for all of DWR's employees, including field division and district offices. She transferred to the Cash Receipts Section of Fiscal Service's General Accounting Branch until her retirement.

Her assignment included setting up accounts receivable for employees, processing stop payments for lost checks, and gathering signature cards for check pickups.

Patricia's State career began in 1975 as an Office Assistant for the Employment Development Department. Her assignments included billing, fiscal and personnel. She was later promoted to Accounting Technician.

To live closer to her daughter, Patricia's retirement plans include moving with her husband to their new home in Nevada. They also plan to travel throughout California and the East Coast in their trailer. ■

## Retirements *continued*

### Thang Tu

Operations & Maintenance  
Staff Information Systems Analyst

### Ronald Vanscoy

Oroville Field Division  
Water Resources Engineering  
Assoc.

### Kenneth Watts

San Joaquin Field Division  
HEP\* Maintenance Supt.

### David Willems

Delta Field Division  
HEP\* Mechanic I

## New Hires

### Jose Alarcon

Statewide Integ. Water Mgmt.  
Senior Engineer

### Rebecca Gilbert

Environmental Services  
Environmental Planner (Arch.)

### Charlie Olivares

Statewide Integ. Water Mgmt.  
Research Writer

### Natasha Walton

Southern District  
Environmental Scientist

### Nancy Bluhm

San Joaquin District  
Office Technician

### Baljit Gill

San Luis Field Division  
Electrical Engineer

### Daniel Orr

Operations & Maintenance  
Electrical Engineer

### Nicole Wietsma

Management Services  
Office Assistant (Typing)

### Christopher Carter

Oroville Field Division  
Utility Craftworker

### Susy Gonzalez

Engineering  
Office Assistant

### Christina Sabala

Technology Services  
Assoc. Information Systems  
Analyst

### John Wright

Technology Services  
Sr. Information Systems Analyst

### Scott Couch

Flood Management  
Senior Engineering Geologist

### Marina Guerra

Technology Services  
Staff Information Systems Analyst

### Sarah Sol

Statewide Integ. Water Mgmt.  
Research Writer

### Xizao Yang

San Joaquin District  
Engineer

### Christopher Danilson

Delta Field Division  
Utility Craftworker

### Brett Harvey

Environmental Services  
Environmental Scientist

### Petar Stojadinovic

Technology Services  
System Software Specialist II

\* Hydroelectric Plant  
\*\*\* FloodSAFE Environmental  
Stewardship & Statewide  
Resources Office

### Ellyn Davis

FESSRO\*\*\*  
Environmental Scientist

### Kaylie Humbert

Northern District  
Office Assistant (Typing)

### Charles Tyson

FESSRO\*\*\*  
Environ. Program Manager I  
(Supv.)

### Shiva Dusanapudi

Technology Services  
Systems Software Specialist II

### Amy Lyons

Northern District  
Staff Environmental Scientist

## Promotions

**Gregory Aleksich**

Engineering  
Construction Supervisor I

**Javed Ashraf**

Operations & Maintenance  
Associate Control Engineer

**Shawn Bega**

San Joaquin Field Division  
Utility Craftsworker

**Russell Bowlus**

Safety of Dams  
Senior Engineer

**William Brackney**

Operations & Maintenance  
Senior HEP\*\* Utility Engineer

**Deanna Butler**

Oroville Field Division  
Business Service Officer I

**James Carroll**

Operations & Maintenance  
Staff Services Manager I

**Michelle Chen**

Fiscal Services  
Accounting Officer

**Gail Chong**

Executive  
Program Manager II  
CA Bay-Delta Auth.

**Daniel Clark**

Southern Field Division  
Elect.-Mech. Testing Technician III

**Rudolph Corral**

San Joaquin Field Division  
Elect.-Mech. Testing Technician II

**Balwinder Dhillon**

Operations & Maintenance  
Associate Control Engineer

**Yaser Eilahi**

Engineering  
Associate Electrical Engineer HS

**Joseph Faccenda**

Oroville Field Division  
Mechanical Engineer

**Kevin Faulkenberry**

San Joaquin District  
Principal Engineer

**Angelo Garcia Jr.**

Operations & Maintenance  
Water Res. Engineering Associate

**Kelli Giles**

Engineering  
Staff Information Systems Analyst

**Crisanta Gonzalez**

Flood Management  
Staff Services Manager I

**Sheila Greene**

Bay-Delta Office  
Program Manager I  
CA Bay-Delta Authority

**Sheikh Hassan**

Operations & Maintenance  
Assoc. HEP\*\* Utility Engineer

**William Hicks**

Engineering  
Construction Supervisor III

**Gwen Huff**

Statewide Integ. Water Mgmt.  
Staff Land & Water Use Scientist

**Richard Jones**

Southern Field Division  
HEP\* Mechanic Supervisor

**Annabel Kuo**

Fiscal Services  
Accounting Officer

**Daniel Lamb**

Delta Field Division  
Utility Craftsworker Supv.

**Kevin Loutensock**

Central District  
Water Resources Tech. I

**Candi Malone**

Engineering  
Assoc. Governmental Program  
Analyst

**Eric Martinez**

Executive  
Engineer

**Donnie Merryman**

San Joaquin Field Division  
Chief HEP\* Operator

**Erik Moyer**

Fiscal Services  
Accounting Administrator I

**Kent Nelson**

FESSRO\*\*\*  
Program Manager II  
CA Bay-Delta Auth.

**Albert Pain**

Southern Field Division  
Elect.-Mech. Testing Technician II

**Matthew Sj Pi**

Flood Management  
Engineer

**Kayalvizhi Raju**

Southern Field Division  
Water Resources Technician I

**Matthew Reeve**

Operations & Maintenance  
Program Manager II  
CA Bay-Delta Auth.

**Rupinder Rehal**

Operations & Maintenance  
Associate Control Engineer

**Ruben Reveles Jr.**

Management Services  
Materials & Stores Specialist

**Evelyn Rucker**

Fiscal Services  
Accounting Officer

**Charlie Saiz**

Oroville Field Division  
Utility Craftsworker Supervisor

**Ravi Sharma**

Operations & Maintenance  
Sr. HEP\*\* Utility Engineer (Supv.)

**Kevin Sun**

State Water Project Analysis Office  
Senior Engineer

**Xinyan Tian**

Fiscal Services  
Accounting Officer

**Michael Tufts**

Fiscal Services  
Staff Services Manager II (Supv.)

**Wesley E. Watson Jr.**

Southern Field Division  
Sr. HEP\* Operator

**Robert Wickstrom**

Delta Field Division  
Utility Craftsworker

**Jason Williamson**

Southern Field Division  
Utility Craftsworker Supv.

**John Wilusz**

FESSRO\*\*\*  
Senior Engineer

**Wayne Wong**

Operations & Maintenance  
Associate Control Engineer

**Jimmie Wright**

Delta Field Division  
HEP\* Mechanic Supervisor

**Marcus Yee**

Environmental Services  
Senior Environmental Scientist

**Reza Zamanian**

State Water Project Analysis Office  
Senior Engineer

**Richard Zmuda**

Management Services  
Assoc. Governmental Program  
Analyst

\* Hydroelectric Plant

\*\* Hydroelectric Power

\*\*\* FloodSAFE Environmental  
Stewardship & Statewide  
Resources Office



## Obituaries

### William Verigin



**William Verigin**, retired Chief of the Design Office with the Division of Engineering (DOE), passed away at the age of 82 on December 23, 2010.

After graduating from the University of Pacific with a Bachelor of Science in Civil Engineering, William, a native of California,

began his career at DWR in 1952. For more than 50 years, he worked and consulted with DWR except from 1981 to 1986 when he worked for R.W. Beck and Company of Seattle.

Known as an expert civil engineer and geotechnical consultant, William worked in the Division of Safety of Dams (DSOD) and Division of Engineering. While with DOE, he

worked on many projects, including East Branch Extension, Integrated Storage Investigations and Sites Reservoir. As Design Office Chief, he approved contract documents for over 60 water projects. As consultant with DWR, William provided geotechnical analysis and review of contract documents related to the design, construction or repair of State Water Project facilities, including the Crafton Hills Reservoir Enlargement project, Patterson Reservoir Remediation and Dyer Reservoir.

William provided mentoring to many DWR employees and will long be remembered for his professionalism, humanity and generous nature.

Preceded in death by his oldest son Paul in 2008, William is survived by his loving wife of 58 years, Carol, and four children, Steve, Mike, Kathleen and William Jr. ■

### Philippe Lutete



**Philippe (Mengi) Lutete** passed away at the age of 66 on June 15, 2010 in Mountain View, California after a long illness.

Lutete began his career with the Department's Southern Region (then Southern District) in 1988.

He provided technical assistance to local water agencies in the preparation of water management plans to help them comply with the requirements of the Urban Water Management Planning Act.

He also assisted agencies seeking to develop Leak Detection and Water Audit programs within their service areas. In 1991, he transferred to Sacramento to work in the Division of

Planning, North Delta Water Management Section as an Associate Engineer. In this position, he worked on studies related to channel dredging, recreation planning, and a field inventory of structures on Delta islands for an economic evaluation of flood protection benefits.

In 1995, Lutete left DWR to teach high school math at the Ventura Youth Authority in Ventura, California.

Lutete's co-workers at DWR remember him as a gentle, caring person and gifted story teller with a passion for helping young people reach their potential.

He was devoted to his own children, Brian, Andrew, and Michael, and to helping them to develop their intellects. He is survived by his wife Marjorie, sons, Brian Andrew and Michael, and his brother, Daniel. He will be missed by those who knew him. ■

### Tim Todd



**Tim Todd**, retired Engineering Geologist from Engineering's Project Geology Section passed away on September 11, 2010 at the age of 61.

From 1991 to 2004, he worked in Project Geology. He worked extensively on the Coastal Aqueduct, the San Bernardino

Tunnel Intake Reconstruction, South Delta Barriers, East Branch Extension project, Sites Reservoir, and various South Bay Aqueduct projects.

Tim, who studied geology and forestry, worked for the U.S. Forest Service before joining DWR. He was an active member of the California State University, Sacramento Geology Alumni Association.

He is survived by his wife, Barbara, of 29 years. ■

## Obituaries

### Robert Eiland



**Robert Eiland**, retired Assistant DWR Director from 1973-74, passed away at the age of 94 on January 2, 2011.

After joining the Division of Water Resources in 1947 as a Junior Hydraulic Engineer, Robert worked on investigations for Bulletin 1, 2, and 3. From 1950 to 1955, he worked on the Feather River Project's Bay Barrier studies. When DWR was created in 1956, he worked on State Water Project studies and Oroville's relocations. He later worked on program control, revenue bonds, financing, and staff

reductions due to the decline in design and construction. During his 27 years with DWR, he became Chief of DWR's Administrative and Technical Services and ended his career working as Assistant DWR Director for former DWR Director John Teerink.

In the early 1980s during the Reagan administration, he was Assistant to former DWR Director and Assistant Secretary of the Army William Gianelli in the U.S. Army Corps of Engineers. He later joined the Federal Government Boundary Commission in Texas.

Preceded in death by his wife of 55 years, Dorothy, Robert is survived by his son Gordon, three grandchildren, and four great-grandchildren. ■

### Josephine Martello



**Josephine Martello**, retired Associate Governmental Program Analyst of the Program Control Office, passed away on December 12.

A native of Sacramento, Joey worked 35 years for the State before retiring in 1988. She worked six years for the Highway Patrol before joining Design and Construction (now called Division of Engineering) in the

Program Control Office. She assisted with preparation and publication of the Program Status Report, and wrote work orders for the division.

A member of the Dante Club Ladies Auxiliary, she served two terms as president, including most recently in 2010.

Preceded in death by her parents and brother Sam, she is survived by an aunt, Rita Martello, and many cousins.

Remembrances may be made in her memory to the American Cancer Society ■

### Miyako Machida

**Miyako Machida**, DWR retired Management Services Technician from Operations and Maintenance, passed away at the age of 86 on December 20, 2010.

Born in Soquel, California, Miyako was raised on a strawberry farm in Watsonville. Miyako's 30 years of State service began in 1962 as a Junior Typist Clerk and later Intermediate Typist Clerk. She became a Clerk Typist II in 1967 and Office Assistant II in 1978. In 1990, she became a Management Services Technician until her retirement in December of 1992. Miyako received several DWR awards, including for Outstanding Office Services in 1977 and 1981.

"Miyako was one of those rare individuals who demonstrated respect and honor for each individual she met or worked with. She was unflappable in her dedication and determination to perform and display the highest level of professionalism," said retired Operations and Maintenance employee Benny R. Ellis, who worked with Miyako from 1979 to 1995. "She expressed faith and hope for all, for the betterment of each individual and was directed and guided by her faith."

Preceded in death by her husband of 42 years, Hideo, and son Dennis, Miyako is survived her two daughters Sandra and Connie and four grandchildren. ■



## Obituaries

### Robert Bond



**Robert (Bob) Bond**, retired Supervising Engineer, passed away at the age of 91 on October 24, 2010.

Born in Boise, Idaho and raised in Southern California, Bob joined the Army Air Force at the onset of World War II where he served as a navigator through the duration of

the war. Robert continued as a member of the Air Force Reserve until his discharge in 1974 as a Lieutenant Colonel.

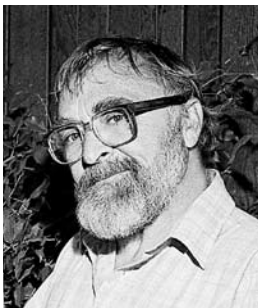
From 1948 to 1952, Robert conducted surveys of reservoir sites, pipelines, and canals for planning studies. After completing his Bachelor's degree at the University of California, Berkeley and a Masters degree at Stanford University, Robert became a civil engineer for DWR in 1954. From 1952 to 1954 at the Yreka Field Office during Klamath River Basin investigations, he

conducted basin-wide studies in Oregon and California on water supply and requirements of upper basin.

From 1954-1957, he was assigned to California Klamath River Compact Commission, where he provided engineering and administration services. From 1955 to 1974, he was assigned to California-Nevada Interstate Compact to provide technical and administrative services. He worked for statewide and Central District Planning Branch for a year. From 1975 to 1979, he was Delta Studies Branch Chief on South Delta water contracts. He worked on Delta water quality studies and fish studies. After his DWR retirement from the Division of Planning in 1979, Bob worked for the U.S. Section of the International Boundary and Water Commission.

Preceded in death by his wife of 54 years, Clara, he is survived by his three children, Judson, Elizabeth and Peter, eight grandchildren, and three great-grandchildren. ■

### Don Engdahl



**Don Engdahl**, retired Environmental Specialist IV, passed away at the age of 77 on April 17, 2010 in the New Mexico village of San Geronimo.

Before joining DWR in 1971 as an Environmental Specialist II, he worked as a reporter for the Press Democrat, covering Sonoma County government for 15 years

before resigning in 1970 to begin hiking the 1,200 miles of California coastline from Oregon to the Mexico border to gather information for an ecological report. Known for his interest in physics, he also made and floated in his own hot-air balloon.

"Don was a jack of all trades. He used his reporter's background to write various project proposals, such as for the first DWR water conservation program," said **Don Meixner**, retired Chief of Flood Management and Engdahl's former

supervisor. "Every project that we had in the Resources Evaluation Office, Don wrote all final proposals."

From 1976 to 1979, Don was an Associate Governmental Program Analyst. He worked on various projects involving water desalination, thermal energy storage and the generating of electricity. Projects in the 1980s included the Los Banos solar pond, valley irrigation, and salinity issues. Don earned several awards, including a Merit Award in 1977 and an Outstanding Accomplishment Award in 1984.

He became an Associate Planner, then transferred to the Division of Planning in 1982. After his retirement as an Environmental Specialist IV in 1985, he continued his interest in metal sculptures and restoring automobiles and dream of building an ornithopter that would carry a human.

Don is survived by his wife, a daughter, four sons, and two grandchildren. ■

DWR NEWS/People  
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STATE OF CALIFORNIA • DEPARTMENT OF WATER RESOURCES

# DWR Mission | *Statement*

To manage the water resources of California  
in cooperation with other agencies, to benefit  
the State's people, and to protect, restore, and  
enhance the natural and human environments.